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CONCEPTS OF TIME AMONG THE TIV OF NIGERIA

PAUL BOHANNAN

THE TIME NOTIONS held by the Tiv of central Nigeria[1] are of importance in analyzing all aspects of Tiv society and culture, but are basic to political structure, to the study of quasi-historical myths and legends, especially those of migration, to mystical beliefs, and to studies of social change among them. The present article deals with (I) the main Tiv words relevant to "time," (II) the ways Tiv indicate time and lapse of time over short periods, (III) the ways they indicate time and lapse of time over long periods, including periods which exceed the lifetime of a single person; it ends (IV) with some implications of the fact that Tiv indicate but do not measure time.

I

All the Tiv words which might be translated "time" can be better and more accurately translated into English another way. There are several adverbs and adjectives expressing long and short duration: for example, the word *cha* means "far" and is used of space, of time, and of kinship. However, such words are not dependent on time indication or reckoning for their primary meanings.

There are at least three nouns *(shighen, dzum, icin)*[2] which mean "occasion." However, slight differences are apparent in their contexts of usage: only *icin*

1 Field work was carried out among the Tiv from July 1949 to July 1950, from June 1951 to January 1952, and from June 1952 to January 1953. I wish to thank the Social Science Research Council and the Wenner-Gren Foundation for financial support, the Colonial Social Science Research Council and the Government of Nigeria for supplementary travel grants.

2 I have used the regular orthography, devised by the Dutch Reform Church Mission, used by literate Tiv. The consonant written *gh* is a velar fricative, voiced in all except the final position; *c* is English *ch*; other consonants have approximately their English value; ô is the open o, British "hot" or American "taught"; all other vowels have approximately Italian values.

can be counted: one time, two times, etc., are *icin i môm, acin a har,* etc. Only *shighen* can be used in the sense of "Now is the time" *(shighen kuma er)*. Although *dzum* applies to longer intervals from the referent action than the other two, all three of these words are used for "at that time."

All are used primarily in clauses which would be, in English, "when" clauses: "When he came" *(dzum u a ve . . .)* etc. It should be stressed that these "when" words remain nouns in such contexts. I believe that the adverbial notion "when" is missing in Tiv (though its place is adequately catered for by the "occasion" words). It is the "occasion" words which introduce an event with which another event is to be correlated.

II

Time Indication by Natural Phenomena

When it is necessary to place an incident in time, as it often is, Tiv do so by referring it to a natural or a social activity or condition, using solar, lunar, seasonal, agricultural, meteorological or other events. Tiv ritual is not associated with a calendar, and for this reason ritual events are not usable as time indicators as they are in many societies.

Among Tiv, time is indicated by a direct association of two events. "He came the day I left" is an association of two events to indicate time; "I was married in the year we were fighting the so-and-so" is another; "We will leave when the sun is there" (pointing to a position in the sky) is yet another.

Tiv use the same word for sun *(iyange)* and for the period between sunrise and sunrise. Though there are other words to describe other aspects of the sun—*ou,* for example, means "the sun" when one is discussing the heat of the sun—there is no other word for the period of a day and a succeeding night. Thus, a day is a "sun."

The most common method of time indication during the day is to point to the position in the sky which the sun will occupy at the time under consideration. There are, however, several parts of the day which have names, which may be used with or without the pointing gesture. There are words for dawn[3] and for early morning[4] and for late morning.[5] There is a word *(tetan)* for

3 *Sev,* usually used in the full idea "dawn is breaking" (*sev mbu aven*), which also means, in narrative, "the next day."

4 *Pepe.* If the word is repeated *pepepepe* (sometimes accompanied by a gesture with the fingers indicating smallness) it means "very early in the morning" and includes dawn. The more times the word is repeated, the earlier the time referred to.

5 *Nomyange*–male sun. This is occasionally divided into "little male sun" and "big male sun"—centering about 9 o'clock and 11 o'clock respectively. *"Mtan"*—"the shining" may also be used with "big" and "small" to indicate the same times.

indicating the heat of the day, when the sun is more or less directly overhead. This word, as antonym to night *(tugh)*, also means "daylight" and by extension, "not connected with witchcraft," because witches operate at night. *Ikiye* is the period from about 4:30 to sunset.

Tiv are much less specific about time during the night. The time between dusk and about 10 o'clock is called "sitting together" *(teman imôngo)*. After that follows "the middle of the night" *(helatô tugh)*, which overlaps with the "time of the first sleep" *(icin i mnya môm)*; "the time of the second sleep" *(acin a mnya ahar)* is about 3 AM or a bit later. The pre-dawn breeze *(kiishi)* gives its name to the period just before dawn.

Months can be counted and referred to by the Tiv word *uwer* which applies both to the moon and to the period between one new moon and the next. "The moon comes out" *(uwel u due)* means both the time between the new moon and full moon, and also the new moon itself. However, if Tiv point to the sky with the words, "When the moon comes out here" *(uwel u duwe hen)*, they are referring to the date of the lunar month when the moon will be in that position at dusk. "The dark of the moon" *(uwel u ime)* is a time of quiet nights; people are most likely to catch cold or to be bewitched at this time of month, Tiv say.

Though administrators, missionaries, and literate Tiv translate the English word "month" by the Tiv word "moon" *(uwer)*, and use transliterations of the English month names, Tiv themselves have no lunar month names.

Moons are sometimes counted by pregnant women to determine their stage of pregnancy. According to them, the period of human gestation for a male child is nine moons and for a female child eight moons. Some women make marks on their hut walls to indicate the passage of the moons. The marks seldom tally with the event: that they do not do so is put down to human error—either the woman made two marks one month, or forgot one or more months. The discrepancy does not affect the belief.

Tiv refer to years by counting "dry seasons" *(inyom)*. There are two distinct seasons in Tivland: the dry season lasting from November to April, and the wet season extending from May to October. The wet season as a whole is called *fam*, which is also the more specific name for two periods within it, but wet seasons are not counted for the purpose of enumerating years.

Both the wet and dry seasons are subdivided for purposes of reference. In April, during the cyclones which precede the return of the rains, there is a period of varying length which Tiv call "stripes of dry and wet season" *(karegh u nyom, karegh u fam)*. The comparable period which precedes the dry season is called the same thing, with the order reversed (stripes of wet and dry season).

These seasons also have other names: that before the wet season is sometimes called "the heat of the body" *(icen iyologh)* while that before the dry season is sometimes called "the approach (lit. enlightening) of the dry season" *(wanger nyom)*.

The wet season *(fam)* is itself divided into five "seasons": "new rain" *(wulahe)* in May, "planting (guinea corn)" *(tswagher)*[6] in June and early July, the *fam* itself in July, sometimes running into early August. At this time of year there is often a break in the rains called the "little dry" by the British—Tiv call it "mid-*fam*" *(atôatô fam)*, after which the "*fam* returns" *(fam hide)* during September and the first part of October (the wettest time of the year).

The dry season is divided by different harmattans, the dust-bearing northerly wind from the desert. The first appearance of the harmattan haze and wind, about the first of December, is called "the harmattan which dries the okra" *(hil u kelen atur)*. The next is the "harmattan of the broken calabash" *(hir u abebejôndugh)* and the third and longest, from early February stretching well into March, is the "grand harmattan" *(hil u vesen)*. Since the harmattan winds and dust do come and go, but are not divided neatly into three every year, there is always disagreement about the "correct" term for the current harmattan. Furthermore, the order of names varies in different areas, and some people will list by name as many as five or six various harmattans.

Though seasons are not sharply defined, each does have its climatological peculiarity. *Tswagher*, for example, is a time of cloudy and turbulent skies, but there is little rain. So long as this sort of weather is to be found, and the millet is not yet ripe, it is said to be *tswagher*. As soon as the millet is harvested, and the cloudy weather has given way to rains, it is *fam*. If one of these conditions has occurred but not the other, it may be either *tswagher* or *fam*. It does not really matter to Tiv where one ends and the next begins; no social or ritual events depend upon it.

Tiv make no correlations between these seasons and "moons"—I have asked specifically and exhaustively about this point.

Agricultural activities are used to designate portions of the year; although they are, of course, roughly correlated with seasons, they are to Tiv more precise than seasons. "The time for clearing fields" means September-October in the south, December in the northwest and in the east: the differences are due to ecological conditions. "The time for planting millet" is about April in all areas.

Tiv "seasons" are determined as much by agricultural activities as by climatological changes. Instead of saying, "We cut the guinea corn when the

6 Both the operation and the time of year are called *kpilin ivor* in northwestern Tivland.

first harmattan comes," as we would do in English, Tiv just as often say, "The first harmattan comes when we cut the guinea corn." This reversability is indicative of the fact that neither event is considered primary or basic to the other. Instead of an implied causal relationship, there is mere association of two events.

Besides agricultural activities, the cycle of crop rotations and fallow periods—covering four or five years—are occasionally used as time indicators for slightly longer periods. "That happened just before we cleared the field now in beniseed" indicates a period approximately two and a half years ago (in the south—the time varies, of course, with the different farming practices in different areas).

Time Indication by Social Phenomena

Tiv, particularly those in the central and southern areas, recognize a five-day cycle of days, each day of which is named after a market. Europeans in the area call this period a "market week," though Tiv do not have any word for the five-day period except the word "market" *(kasóa,* from Hausa, *kásua).*

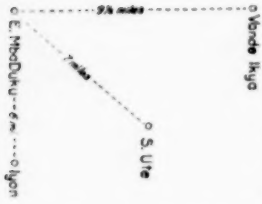
Most Tiv markets are held every five days.[7] These markets are named for their founder or for the present-day market master *(tor kasoa)* or for the name of the lineage in whose territory they are located, or sometimes for streams or hills nearby. Many markets have two, or even three, names. These markets, in turn, give their names to the days on which they are held. Tiv have no names for the days of the five-day cycle other than the names of particular markets.[8] Since each market is held every five days, the day names form a repeating series of five. People generally refer to the days by the names of those markets which are nearest to their homes, and therefore most frequented. This habit gives rise to changes in day names within relatively short distances. A day name will, of course, be understood in many adjacent areas where it is not used. An example will illustrate this point:

Markets in Different Areas

Day	*E. MbaDuku*	*Iyon*	*S. Ute*	*Vande Ikya*
1	Atsar	Atsar	Atsar	Ingwa
2	Iyon	Iyon	Pev	Sharwan
3	Aichwa	Dar	Aichwa	Agbo
4	Chukwan	Ajio	Ako	Wankar
5	Angur	Adikpo	Adikpo	Gbako

7 Some few are held every ten days. Protestant missions have established Saturday markets in areas immediately under their influence, and in the northeast, at least, other markets have been put into the seven-day cycle, which runs concurrently with a five-day cycle.

8 Udam, to the south of Tiv, have day names which are sometimes applied to markets.



"The day of Iyon market" *(iyange Iyon)* is used in the area of Iyon itself, and some six miles to the west, in MbaDuku; at no greater distance to the northwest, however, the same day is called "the day of Pev market" although everyone in that area knows that Iyon and Pev markets are held on the same day and has no difficulty if a stranger uses the other term. The same day, at Vande Ikya, is called "the day of Sharwan market" or "Sharwan day." People of this area know both the other nearby markets held on that day, but use their names only when travelling in the area where they are in general use. If one were to continue north another few miles, people would be hazy as to exactly which day Iyon market is held. It is considered polite, when travelling in Tivland, to use the day names in current use in the locality where the traveller finds himself. If he does not know the customary day name, he will use another, often adding that he does not know if that is correct local usage; the local people will then set him right. Several times I have been reprimanded in Iyon for using the day names of the Eastern MbaDuku market cycle; they are perfectly well understood, but people say, "You are here now; you must call the days as we do."

The range within which the name of a market is commonly used as a day name is roughly proportional to the size of the market. Atsar and Adikpo markets are both very large ones, with the result that people from large areas attend them, and days take their names from these markets over a larger area than, say, Angur or Pev markets, both of which are quite small.

Tiv not only make appointments and time references within the terms of these market cycles, they count them as well. "I have been here three markets" means that the local market has been held three times since the speaker's arrival—from eleven to fifteen days.

All Tiv know that Europeans use a seven-day week. Their translations for day names are "day of beginning work" *(iyange i hiin tom)* for Monday, "second day of work" *(tom yange a har)*, etc. Saturday is usually *Saadi*, and weeks are sometimes counted by counting Saturdays. Sunday *(Lahadi)* is however the more usual day to be counted for "weeks," because it is of somewhat greater importance for most Tiv. Tiv say that in the past they did not have a day of rest, but since the Europeans first showed them the custom, it is widely observed.[9]

9 Tiv had almost undoubtedly heard of a day of rest before European penetration—their southern neighbors, the Udam, have one day of their five-day market week in which they do no work; Hausa observe Friday, the Muslim sabbath, in a rough and ready sort of way.

Sunday is important nowadays, having been introduced as the European day of rest, and become associated with beer drinking. The best Tiv beer takes seven days to brew, and though beer may of course be set and drunk on any day, both operations are commonly done on Sunday. In the northwest, where there are very few markets, the days of the seven-day week are often called by the names of processes in the brewing week, the "day for drinking" *(iyange i vihin)* generally being Sunday. The "day for drinking" may, however, change with every new batch of beer.

Weeks are counted by some Tiv by counting "worships" *(adua)*. This is the Hausa word for Muslim prayer which has been adopted by Christian missionaries for church services. The word is today generally known, and is used to indicate both Christian church services and the week.

There are several points of special importance in the material so far presented. Tiv refer to time by direct association of two events, one of which is likely to be, but need not be, of a meteorological or social nature, and a part of a cycle or a repeated series. Moreover, Tiv indicate lapse of time either by indicating the span of time commensurate with the period between two natural or social events in a well-known series, or—more commonly—by counting repetitive natural or social events.

Suns, moons, and dry seasons—days, months, and years—as well as markets and weeks: in each case reference is to a recurrent natural or social phenomenon which can be counted. That this is a matter of *counting* is of special importance.

Although there are various named periods during the day, and various named seasons during the year, there is no word which means a subdivision of a day, and there is no word for "season." There is no notion of periods of the day which can be counted: nothing of which you can say that there are four or five between dawn and dusk. Likewise, it is impossible to say that there are four or five "seasons" or "sub-seasons" during the wet season, for there is no generalized thing in the Tiv idea which can be counted.

For Tiv, time is divided by natural and social events into different sorts of periods, but since the events often belong to different logical series, there is little attempt to correlate the different sorts of division of time. Tiv make no attempt to correlate moons with markets or either with agricultural activities, or seasons. If one asks how many "moons" there are in a year, the answer varies between ten and eighteen; if one asks the number of markets in a moon, the answer varies between three and eight; if the number of days in a moon, between ten and fifty. Tiv could, of course, observe these matters accurately if they chose

to do so. We must assume, on the basis of this evidence, that they have no occasion for doing so.

There are other situations in which, on the surface, Tiv doctrine seems actually to contradict our notions of time. Age-sets *(kwagh)* are loosely organized when their members are about twenty years old. Tiv tell the investigator that all the members of an age-set were born in the same year. The ordinary European interpretation of this statement (at least, it was mine) is that an age-set is formed every year. However, when by careful study one determines that in point of fact a new age-set is formed about every three years, and points this fact out to Tiv, adding that if a new one were formed every year there would be more of them, most Tiv will say that you are quite right: nevertheless, they were born in the same year as all the other men of their age-set. The statement must be interpreted equivocally, referring to the nature of the relationship between age-mates, not as referring directly to time. Tiv do not make a correlation "one age-set:one year" just because everyone in the same age-set was "born in the same year." The two statements have reference to different aspects of the social life. So far as I am aware, Tiv do not use age-sets for purposes of time correlation or time reference as some societies in East Africa are said to do.

III

Tiv indicate most periods of time which exceed four or five years in length, but which are still contained within the life expectancy of a single man, by reference to the life-cycle of the individual. Again, time is indicated by direct correlation of two events: "That market hadn't yet moved when my eldest son was born, for I bought camwood there to rub on him" is made specific by the fact that one can see the son and so get some idea of the time involved. "The Europeans came after I had been circumcized, but before I married" is a typical expression of time indication over such a longer period of time.

Except in response to an ethnographer's "when" questions, the purpose of such sentences is not to indicate specific time, but to indicate lapse of time and more often to indicate sequence and relative duration by reference to a culturally accepted series of social events or to common human factors such as the rate of growth and maturation of the human being.

Furthermore, the mere fact that two events occurred within the lifetime of a single man is not *per se* any indication that we can accept his correlation of the two events, in what we would call a time milieu, as accurate. Most people can, I should judge, remember the order of several related events in a single series of events, even though none or not all of them are repetitive. That is, one

can remember the series of events leading to one's marriage in the correct order; one can remember the events which led to an election, also in the correct order. The question is: can these two logically unrelated series of events, if they took place simultaneously, be accurately interdigitated from memory after a lapse of several years, in the absence of a formulated, calibrated time dimension? This is a problem for experimental psychologists—one of which they are not unaware, but one on which they seem not yet to have worked sufficiently. It lies, of course, at the basis of the ethnologist's problem of historical reconstruction.

Except for occasional references to dead parents, grandparents or friends, in which time is usually not in any wise important, Tiv refer to periods of time longer than a single life-span, or further removed than a single life-span, in only two contexts: that of genealogy and that of the myths and legends of migration, which include myths of origin of social traits and cultural items. Genealogies, intrinsically, bear their own time elements; myths and legends of migration and culture origins are timeless.

From the point of view of Tiv, there is comparatively little to say about such statements. Since, however, there is some likelihood that Tiv statements of this sort will be misunderstood by Europeans—since, in fact, some writers on the Tiv have misunderstood and mistranslated them—it is just as well to look more carefully into their content.

Tiv believe that their genealogies are true *(vough)*. It is important in investigating Tiv time ideas, however, to realize that the operative "true" correlation of genealogical depth lies with Tiv political structure rather than with biologically countable generations of ancestors:[10] with social space instead of with time of any sort. That in genealogies the generations are not primarily time notions is demonstrated by the recent addition of a new ancestor—Adam. In the same way that ancestors such as Ishon and Takuluku were postulated prior to "Tiv," the ancestor, (but never in so systematic a way as the descendants of "Tiv") in order to place the neighboring peoples in a genealogical relationship with themselves, so when Tiv encountered Europeans and heard the creation story, they immediately accepted "Adám and Ife" as part of their cosmic doctrine, and thus were enabled to include Europeans, as a lineage, in the over-all lineage brotherhood of the human race. We have on several occasions been asked by ex-soldiers whether the Japanese, Burmese, and Indians are subordinate lineages of the Europeans, and if not how they fit in.

It is obvious that in recognizing Adam, Tiv have incidentally added a generation to their social time. This is incidental, and I believe irrelevant to them.

10 Laura Bohannan, *A Genealogical Charter* (Africa, vol. 22, p. 301).

The reason that the Adam story was accepted so quickly was that it allowed them to account for formerly unknown men and social groups, hence increasing their spatial horizons, in a familiar idiom.

Yet, intrinsically, an increase of time is concomitant with an increase in space. Tiv tell an investigator that they are more numerous today than they were in the past. If one challenges the statement that there were fewer people long ago, Tiv cite lineage genealogies to prove that you are wrong. We collected information which enables us to show how Tiv genealogies "collapse."[11] It is a basic Tiv notion that, unless evil forces are at work, a child generation is larger than its parent generation. That Tiv say they increase with the passage of generations is primarily a cosmographical notion, and its spatial aspect is of vastly greater importance than its temporal aspect.

Tiv say that since they increase with the passage of time (and since every Tiv has a right to sufficient farmland in the territory of his minimal agnatic segment) the amount of territory which they occupy also increases.

None of these three ideas—increase of area, passage of generations, and population increase—is independent. Each is validated by the other two. A man knows that an event happened long ago because there was a different spatial distribution than is to be found at present and because "we were few." "We were few" obviously because of the fact that the different spatial distribution is said to have existed and because it was long ago. A different spatial distribution existed because "we were few" and because it was long ago. This is a circular argument from which there is no escape.

The more important fact, however, is that beyond a generation or two, neither a particular spatial distribution nor a specific event in the myths and legends of migration and cultural origins is commonly connected with a specific ancestor in the lineage genealogies. Though a few Tiv elders may make an occasional connection, there is certainly no general agreement, and the most amazing fact is that the "characters" in the myths and legends are *not* attached to a specific ancestor at a specific point in the genealogies.

It is difficult to realize why Tiv do not associate genealogies with myths and legends (for genealogies would be their only way of setting the mythical and legendary events in time) until we understand that the events and incidents in the legends and myths are told in explanation of social process, not as "history." The most common incidents all cluster about a standard situation which arises time and again in the dynamic of Tiv social process: particularly fission and

11 *Ibid.*

fusion of lineage territories, which are the modal points in Tiv political process. As one collects more and more versions of the myths and legends in different parts of the country, it becomes evident that there are a relatively few stock incidents which can be applied to any instance of the social process to be illustrated. It is, of course, as impossible to prove that these incidents did not occur as to prove that they did. It can be stated with confidence, however, that they are applied to many different instances and that they are seldom correlated with specific persons in the genealogies.

The timelessness of the myths and legends is even more apparent when one realizes that a lineage name is the plural form of the given name of its apical ancestor. The grammatical number, here, is not so important as it would be in English; Tiv jump back and forth from singular to plural forms in these contexts with an ease and agility which at first bewilders the European mind which is used to precision in these matters. In recounting the adventures of a lineage, Tiv do not distinguish between the founder of a lineage and his group of descendants: it is impossible for them to tell an investigator whether a certain incident happened to "Kpar" (the man) or "Kparev" (the lineage made up of his descendants). Most will say, if pushed, that it does not matter—how could they know, since they were not there?

"Time" associations beyond the grandparents of living adults are utterly vague. Instead of referring an incident to a genealogy to pin down its time element, Tiv are content to say that it was "long ago" *(ngise)*—the same term with which they begin their animal folk tales. Although "long ago" can, in some contexts, mean day before yesterday, or even an hour past, most commonly it has no specific time referent at all, in the sense that we are accustomed to think of it. Its purpose is not so much to indicate that something happened long ago, as to indicate either that it is established and traditional, or else that it is outside the immediate purview.

The important point here is that Tiv, by and large, do not even correlate events over a period of time beyond a generation or two. There is only a dim "long ago" *(ngise)* which can be increased by saying "long long ago" *(ngise ngise)*—the more times you say the word, the longer ago or further removed it was. "Long ago" was filled with events and with people, but they are—from the standpoint of time reference—of much the same quality as the events which it is assumed will take place in future *(sha hemen,* literally "in front").

Tiv have not elicited the time element implicit in their lineage and political structure any more than they have elicited "time" from the course of a human

life, the recurrence of the phases of the moon or of five-day markets. Time is implicit in Tiv thought and speech, but it is not a category of it.[12]

IV

We in Western Europe have elicited an idea, or a medium, which we call "time"—or better, "chronology"—and have calibrated it into a standard gauge against which we associate single events or a series of events. The presence of such a time gauge among our cultural apparatus means that in addition to time indication and time-lapse indication, we measure time.

A minute and a day are qualitatively as well as quantitatively different: the difference is that between measuring and counting. Days are natural events and can be counted without a special apparatus; minutes and hours are artificial events, if they be events at all, and can be counted only with the aid of special apparatus. Those Tiv who are acquainted with the idea of "hours" from Europeans seem to have changed the idea somewhat: Tiv servants and clerks use the word *ahwa* for "hour." Besides its obvious similarity to the English word, this is a plural form of *ihwa,* which means "mark" or "tally." One o'clock is "one mark" and six o'clock means "six marks." They are, in fact, counting the marks on a watch, I believe quite unaware that the watch is merely a device for counting standardized symbols for artificial units of time.

Thus, although Tiv indicate time by direct association of two events, and though they count recurrent natural units such as days, markets, moons, and dry seasons, they do not measure time. Because of the fact that they do not, by and large (and certainly not with any consensus) associate legendary incidents with genealogical ancestors (which supply the only "system" which has immanent in it some sort of "natural time" to which long-period reference could be made), there is no device for indicating time in the distant past with any greater accuracy than in the future.

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12 Evans-Pritchard has pointed out that to Nuer, the notion we call "time" is not a separate idea, but an integral part of social activities and ecological and meteorological phenomena (E. E. Evans-Pritchard, *The Nuer,* 1940, pp. 104-108).

MARRIAGE IN MALABAR[1]

STEPHEN C. CAPPANNARI

INDIA, and especially South India, is often referred to as an ethnologist's paradise, owing in part to the striking diversity of cultures found there. This paper deals with a particularly interesting type of marriage in the southwestern (Malabar) coast or, more precisely, in the native states of Cochin and Travancore.

Here the Nayar (frequently spelled Nair), as Linton has shown, have gone as far as any people in the elimination of the sociological role of the biological father in their family.[2] Nayar women have legal and legitimate "husbands," more or less permanent, who apparently are merely nocturnal visitors in the homes of their consorts. Disciplinary and other usual duties of a "father" are vested in the mother's brother, and his sister's children are his heirs. Such latter features are not unusual anthropologically but Nayar custom contains singular features which have been subject to several interpretations. It is the intention of this paper to describe Nayar marriage and examine its relationship to some contemporary considerations of family and caste organization in the light of the controversy regarding them.

The very existence of a social structure which separates a husband from his family has in fact been questioned. In *Social Structure* Murdock writes regarding Linton's assertions concerning the Nayar: "Linton mentions the Nayar of India as a society which excludes the husband and father from the family, but he cites no authorities, and the sources consulted by ourselves for this tribe do not substantiate this statement."[3]

It was my good fortune to come to know three persons at Wayne University, whose homes are in Travancore, and who were kind enough to provide me with first-hand observations which do uphold Linton's contentions.[4] Apart from the material ascribed to Reverend Samuel Mateer, this paper derives its data from the observations of these three individuals.[5]

1 Paper read before Anthropology Section, Michigan Academy of Science, Arts, and Letters, April 11, 1952.

2 Ralph Linton, *The Study of Man* (New York, 1936), pp. 154-155.

3 G. P. Murdock, *Social Structure* (New York, 1949), p. 3.

4 They are Miss Anna Matthews, Mr Joseph P. Joseph, and Professor Florence Taylor. Professor Taylor is Dean of the School of Nursing at the Christian Medical College in Vellore, South India, and has spent many years working with the populations of Cochin and Travancore.

5 S. Mateer, *Native Life in Travancore,* (London, 1883). After this paper was written, an interesting account of Nayar marriage was published in *The Reporter,* June 10, 1952, pp. 17-21. The article by Jean Lyon is entitled, "Where Women Rule the Roost."

Nayar marriages are comprehensible partly in terms of the relationship of the Nayar caste with the caste known as the Nambudiri Brahmans. It will hence be necessary to describe relevant features of both castes. Each speaks Malayalam, a Dravidian language which is spoken by virtually all of the inhabitants of Cochin and Travancore, regardless of caste affiliation.

The Nayar are traditionally a warrior caste, but they are regarded by Brahmans as Sudras rather than Kshatriyas. This designation is misleading, for the Nayar enjoy relatively high status, being ranked only a little below the Nambudiris, who occupy a top position in the local hierarchy. Mateer lists eighteen recorded Nayar subcastes arranged in hierarchical order, of which the Kiriyattil Nayar are the highest.[6] Not all of these subcastes, members of which may eat together, are allowed to intermarry.[7]

In the matrilineal Nayar household the senior woman may have considerable authority, but the family business manager is ordinarily a male. The typical occupants of a Nayar residence are a man and his brothers, their sisters, and their sister's children. In the upper Nayar subcastes no husband resides with his family. The Nayar dwelling, built facing east according to astrological specifications, usually consists of a series of detached compounds.

There is a strong tradition among the Nayar that a girl should be married before she is ten or eleven years old, and she usually has gone through a formal marriage called *Sambandham* before attaining that age. It is customary to wait until there are enough girls in a household to make a marriage ceremony financially worthwhile before it occurs. As many as thirty girls may be married in a single ceremony.

Arrangements are made with a single Nambudiri Brahman who is to be married simultaneously to all of them. An astrologer is consulted, for his horoscope must indicate a propitious alliance of the groom's natal star with that of each of his brides. This is the official Nayar girl's marriage, involving as it does, the *tali* (a gold marriage badge) and much of the ceremonial characteristic of upper caste Hindu weddings.

After the ceremony the Brahman purifies himself of the sin of marrying outside his caste, and also receives a fee which is related to the number of brides. Dr David G. Mandelbaum has indicated that the girls' clothes are torn after the ceremony, and then given to a person of low caste to signify the termination of the marriage. In a private conversation Mr J. P. Joseph offers the information that even this gesture is often unnecessary, because the Nayars recognize this

6 *Idem*, p. 30.
7 *Idem*, p. 113.

"marriage" to be what it is, a legal fiction. It must be made clear, however, this marriage does not involve cohabitation, or any future contact between the brides and their husband. The nature of this marriage is further clarified by Mateer's observation that sometimes a sword may be used to represent a bridegroom in this ceremony.[8]

At any time after the Sambandham ceremony, a girl is free to enter into a conjugal relation with a man which does not, however, involve co-residence. Although this relationship may be terminated at any time by either marriage partner or even by the girl's brothers, the unions are not infrequently stable ones, enduring the lifetime of the persons involved. A minor ritual initiating such an alliance, in which the groom makes presents of cloth to the bride and other members of her family, may also occur. "The ceremony called 'giving a cloth', or agreement for concubinage, is also performed in the presence of relatives and neighbours, at an appointed time, usually in the night. The girl is set, with the young man, on a mat on the ground, the emblems called *lingam* and *yoni* being marked in front."[9]

Very often it is again a Nambudiri Brahman who is the husband in this "cloth marriage." After the ceremony, he visits his wife regularly at night. The husband sets out for her house about 8:30 pm, carrying an open wick brass lamp to light his way. When he enters his wife's house he may be greeted by his wife's brother, but it is not customary to offer him any refreshment. He leaves early in the morning, between 4:30 and 5:00, and is not seen about that household during the daytime.

How it is possible that Nambudiri Brahmans are available for this form of marriage? Nambudiri inheritance is patrilineal, and is combined with strong primogeniture. The eldest son inherits everything, his brothers being entitled only to subsistence. Moreover, only the eldest son is allowed to marry.

Polygyny is practised and is encouraged particularly when the first wife is barren. An eldest son may have four or five wives. In addition to these wives the eldest son may also have a "cloth marriage" with a Nayar woman. Should he have no offspring from his Nambudiri wives, the next eldest son is allowed to marry in order to produce an heir. The heir is the first born without reference to the priority of marriage of the father's wives.

Some of the Nambudiri Brahmans are actively priests. Many are large landowners, and its is chiefly these estates which must be transmitted intact to the eldest heir of the male line.

The unmarried brothers are not allowed access to Nambudiri women, and

8 *Idem*, p. 174.
9 *Idem*, p. 175.

they uniformly marry Nayar women in the "cloth" relationship described above. One result of this custom is that a large number of Nambudiri women must remain celibate throughout life. With husbands at such a premium it is not surprising that handsome dowries are offered.

Female celibacy, however, tends to be offset by the practise of polygyny. If a Brahman cannot afford to have his sisters or daughters married, he may take additional wives from the family to which he gives wives in turn.[10] Should a Nambudiri woman die unmarried, the corpse undergoes all the ceremonies of marriage.[11]

It should be made clear that not all the consorts of Nayar women are Nambudiris, for the Nayar caste greatly outnumbers the Nambudiri. Nayar women also enter into these morganatic alliances with Nayar men of equivalent or higher subcaste in accordance with the rule of hypergamy. Mateer and my informants report that these unions are sometimes polyandrous, but I have been unable to gather any specific cases to substantiate this statement.

Nayar marriage requires two men to fill the role of husband and father, a role so commonly occupied by the same person in most societies. The husband is only a progenitor, while it is the mother's brother who ceremonially acknowledges paternity of his sister's children. The mother's brother lives in the same house with these children, acts in every way as a father to them, and they perform the duties of sons to him.

Reverend Mateer, as might be expected in the light of his office and time, contemplates Nayar marriages with righteous indignation.

> It is somewhat odd that notwithstanding the introduction and spread of enlightenment among the higher classes in Travancore, so far as to lead to the preparation and publication of interesting native works, some are yet found who are not ashamed to defend this distortion of the law of nature and of God, and to represent the love and relationship of the father as something merely conventional and legal, rather than natural.[12]

Actually and in a very real sense a functioning husband and father is not excluded from the Nayar family, as the mother's brother performs these functions quite apart, of course, from the procreative duty. Nayar custom appears then to invalidate Murdock's assertion of the universality of the nuclear family only if a system of relationships is confused with the individuals who happen to occupy roles in that system. The economic, sexual, reproductive, and educational

10 *Idem*, p. 170.
11 *Idem*, p. 182.
12 *Idem*, p. 180.

functions mentioned by Murdock are so firmly rooted in the nuclear family, it becomes easy implicity to assume that they comprise part of the "natural" familial organization, which is somehow fixed by certain biologically intrinsic characteristics of the human species.[13]

Post-Sambandham unions between Nayar women and Nambudiri men are also relevant to studies of caste organization. Hypergamous unions are not uncommon elsewhere in India, although they usually refer to marriages between the subcastes of a larger caste.[14] Endogamy as a characteristic of Indian caste structure would appear to be not nearly so rigid as much of the general literature implies.

Inter-caste marriage is also relevant to questions of caste origin and of occupation or race as bases for caste formation. Under the circumstances physical anthropological studies of caste populations, such as relative frequencies of blood types, will assuredly have to take into consideration caste mixture due to unions like the marriage of Nambudiri Brahmans and Nayars in Malabar.

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13 Murdock, *op. cit.*, p. 10.

14 Dr Murray B. Emeneau has in preparation a study of hypergamy in India.

BERBER DIALECTS AND BERBER SCRIPT[1]

WALTER CLINE

CLASSIFICATION OF BERBER DIALECTS

ON THE BASIS of their geographical distribution and their phonetic and morphological variations, the Berber dialects in northwest Africa have been classified into two main groups. These are usually called the Zenatiya and the Sanhaja-Masmuda from their hypothetical association with certain Berber tribes mentioned by medieval Arab historians. For the sake of simplicity I shall call the first group the Zenata and the second the Sanhaja.

Zenata dialects predominate in the north, They cluster in the Rif Mountains of northern Morocco, in adjoining parts of the Middle Atlas Mountains, and on the nearby Algerian border. Farther east they occupy the eastern part of the Aures region, the Island of Jerba off the Tunisian coast, and the highlands of Jebel Nefusa in northern Tripolitania. They are also scattered in small spots in western Algeria and southern Tunisia, and in a number of oases in Libya and the northern Sahara. The Zenata dialects of Morocco, other than those of the Rif group, are believed to have been brought into the country by tribes migrating from cental Algeria between the tenth and the twelfth centuries.

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1 In 1948 the late Dr Walter Cline gave me a copy of the excerpts here published from his manuscript "Bibliography of the Berber Languages" to use as I wished—a characteristically kind act of a man who freely gave to others from the store of information he had amassed. So far as I can learn no part of that "Bibliography" has been published. But is has long seemed to me that these sections from his Introduction should be made generally available. I learn from Mrs Marjorie Cline that Dr Cline gave parts of it to interested students at the University of California and to others, presumably, as with myself, to use as they pleased. It is doubtful that the whole will ever be reassembled and printed. Mrs Cline has willingly consented to the publication of this segment, a permission gratefully acknowledged.

The "Bibliography of the Berber Languages" was one of a series of such bibliographies on North African peoples which Dr Cline prepared. One of these resulted in his ethnographic compilation *The Teda of Tibesti, Borku, and Kawar in the Eastern Sahara* (General Series in Anthropology, no. 12, 1950). The Berber "Bibliography" was not confined to linguistic material, as its title would imply, but was, rather, a listing of all published accounts of Berber-speaking people. It was avowedly incomplete.

The present excerpts were pages 23, 30-40 of the manuscript, the intervening material being a brief summary of grammatical points. The original manuscript contained two tables of Berber and other scripts which are referred to in our text. Unfortunately these cannot now be located, but I have retained the references to them to avoid breaking the continuity of presentation—Leslie Spier.

The main Sanhaja groups are (1) the Beraber or Temazight, in the Middle Atlas and the eastern High Atlas Mountains of Morocco; (2) the Shluh or Tashelḥit, in the High Atlas and southwestern Morocco, enclosing an area of Arabic speech in the Sus valley around Tarudant; (3) the Kabyle of northern Algeria; and (4) the Tuareg dialects, Tamashaq, of the Sahara. Smaller Sanhaja communities live in the western Rif, on the plains west of the northern Middle Atlas, on the desert borders of southeastern Morocco, and in the western part of the Aures district of Algeria. By and large they gravitate to the south, Kabyle being their only large outlier on the Mediterranean coast. . . .

It is impossible to state to what extent Berbers can understand each other. In Morocco the dialect of the Rif and other Zenata dialects are mutually intelligible as soon as certain phonetic difficulties have been overcome. The same has been claimed for Beraber and Tashelḥit. Understanding between a speaker of Zenata and a speaker of Beraber or Tashelḥit, however, is very difficult or impossible. The Beni Senus, speaking western Zenata, can scarcely understand the speech of the Sus [region] or Kabylia, though they have less difficulty with that of the Beni Iznasen, Zekkara, or Figig. The Beraber group seems strikingly uniform in view of its large geographical range: a single itinerant bard may be understood by audiences all the way from the Ait Sadden, near Fez, to the Ait Atta of the Sahara. Until a complete survey has been made, such random observations will have to suffice.

Many Berber words are said to have been derived from Latin. In identifying some of these, French scholars may have been misled by chance resemblances and may have assumed without justification that the borrowing took place directly from Latin during the Roman Empire. In view of the long period of Roman contact and colonization, however, there is nothing improbable in their general claim. Most of the words in question have been observed in Berber dialects which are spoken in or near the districts colonized by Rome, especially northern Algeria and the northern Middle Atlas. The cultural associations of the words also argue strongly for a Latin derivation. By far the greater number pertain to plants, domestic animals, and agriculture, subjects in which the early Berbers may have learned much from the Romans. In the following tabulation are some of the most convincing examples.

Latin	*English*	*Berber*	*Dialect*
hortus	garden	urti	Sus
		urtu	Beraber
		urthu	Beni Senus
		urtho	Kabyle

Latin	*English*	*Berber*	*Dialect*
ager	cultivated field	iger	Sus, Beraber
asinus	ass	asnus	Beraber
pullus	chicken	afullus	Sus, Beraber
jugum	yoke (Latin) ox (Berber)	ayugu	Northern Beraber, near early Roman settlements
pirus	pear	faris	Siwa
		tifirest	Beraber, Haha, and some other southern Moroccan dialects
		tafirast	Sus
quercus	oak	akarrush	Kabyle
		akherrush	Beraber
		asherrush	
fava	fava bean	abau	Beraber
		awaw	Siwa
siliqua	carob tree	taslighua	Beraber
rubia	"garance voyageuse" [madder]	tarubia	Zemmur
ulmus	"orme champetre" [elm]	ulmo	Kabyle
filix	"fougère aigle" (fern) [braken]	ifilku, tifilkut	Kabyle
		tasarut	Sus, Beraber
lilium	lily (Latin), rose-laurel (Berber)	alili	Sus, Beraber

Latin names for the months of the Julian calendar have been recorded from several Berber dialects, including the Tuareg: ennair (yennair), brair (ibrair), mars, ibrir (ibril), mayo (maju), !ulich (yuniu), luliuz (yuliu), ghosht, shutanbir (shtenbir), ktober, duanbir (nuember), dujanbir (djenber). These are roughly correlated with the agricultural year and with certain rural festivals. Their distribution among Berber dialects has not been plotted nor their history traced.

Punic loan words in Berber would form another fruitful subject of research. Since Punic was spoken in the coastal towns of North Africa for more than a thousand years and may have survived in small villages up to the time of the Moslem conquest, we should expect to find that Berber has assimilated more Punic than Latin words, but they would be much harder to identify.

All Berber dialects have borrowed many words from Arabic. The proportion of these in the total vocabulary depends generally on the length and intensity of contact with Arabic-speaking communities. It is highest in Siwa, on the extreme eastern frontier of Berber, where more than sixty percent of the words are of Arabic origin; relatively high in the Moroccan Rif; less so in the Beraber-Shluḥ group; and probably lowest in Tuareg. The degree to which these loan words have been assimilated into the structure of the native language is also extremely variable. Most of them are given Berber inflections, but in some dialects they tend to have special characteristics, such as in the formation of noun plurals. The Arabic definite article *el* is often retained as part of the noun itself. Though many Arabic loan words express concepts which were unknown to the Berbers before the Moslem conquest—particularly religious, legal, and social ones—a great number have no such significance and seem to have replaced their old Berber equivalents. Often a Berber word and an Arabic word with identical meanings exist side by side in the same dialect.

Most Berber men speak Arabic in addition to their native language. Their bilingualism varies through all degrees, from [nearly] complete ignorance of Arabic at one end of the scale to [nearly] complete ignorance of Berber at the other. It depends on several obvious factors: the geographical position of the Berber community in relation to the Arabs, the amount of intercourse between the two, the social and intellectual status of the individual Berber, and the extent of his travels. We could not give a true picture of this situation without making the most detailed survey.

In many communities Arabic is rapidly replacing Berber as the language of the home, and this trend will be accelerated as modern transportation and temporary emigration for military, commercial, and industrial purposes bring the Berbers into contact with the outside world. They have already far surpassed the Arabs in emigration to France and to the large North African towns. We should not assume, however, that Arabization is proceeding smoothly and uniformly. In Morocco the French foster Berber nationalism and do not encourage or assist the Berbers to learn Arabic. It is unlikely that this official strategy will counteract the more natural trends. The cultural conservatism of the Berbers and their old antagonism to the Arabs will preserve their language in some communities for

generations to come. In many others it will be forgotten before the end of the present century.

The greatest number of Berbers ignorant of Arabic are concentrated in the Atlas Mountains of central and southern Morocco and in the Kabyle highlands of northern Algeria. Some of them live within a few miles of large Arab centers. Many who bring the produce of their farms to market in Marrakesh know scarcely enough Arabic to do their business.

Tribesmen of the Middle Atlas are often bilingual, particularly those of the Ait Warain and Ait Seghrushen, who have close contact with the historic highway of Arabization between Ujda and Fez. Most men of the Rif speak some Arabic; many speak it fluently; and several Rifian communities, such as Mestasa, Mtiwa, Targist, and Beni Bu Frah, are rapidly forgetting Berber. In the two large eastern Berber blocs, the Aures Mountains of Algeria and Jebel Nefusa in Tripolitania, most of the men and many of the women are bilingual. Though no general estimate has been published for the Tuareg, the majority are probably bilingual, speaking Hausa or Songhai, if not Arabic, in addition to Berber. On the borders of Berber districts and in the isolated cases, women may know little or no Arabic while their men may speak it fluently.

Only a few instances of the opposite phenomenon—Arab communities learning to speak Berber—have been reported from recent times. One is that of Beni Yasra in the Middle Atlas, and another is in the Aures and Kabyle area where families of Arab holy men have settled among Berbers. The Berberization of small Arab groups, however, must have occurred very frequently during the period of Arab expansion in the Middle Ages.

BERBER WRITING SYSTEMS

The ancient Berbers wrote their language in an alphabet of twenty-four letters. This writing, usually called Libyan or Numidian, was used in the northern part of North Africa at least as early as the second century before Christ. It seems to have been abandoned in that region at about the time of the Arab conquest. In the Sahara, however, closely related alphabets survived. These have been tentatively classified as (1) Old Saharan and (2) Tifinagh, the alphabet used by the recent Tuareg.

Since the Libyan alphabet was not employed extensively for literature or communication, it escaped mention in most of the contemporary accounts of North Africa which have come down to us. Fulgence, a North African Roman of Vandal times, refers to it incidentally when discussing the alphabets of the

Hebrews, the Romans, and the Greeks. It was not until 1631, when a bilingual inscription in Libyan and Punic was discovered at Dugga in Tunisia, that the attention of Europeans was again called to this forgotten script.

Several hundred Libyan inscriptions have since been reported. Most of them are epitaphs. They are usually very brief, consisting mainly of personal names and a few conventional phrases. If Libyan writing was ever used in long documents, no trace of them remains. The characters are simple and predominantly rectilinear, well suited to carving in stone. Variant alphabets may have existed. Most of the inscriptions are to be read upward, beginning with the left-hand column, though horizontal rows reading from right to left are not uncommon and some columns read downward. The words are not separated.

By far the greater number of these inscriptions have been found in northeastern Algeria and the adjoining parts of Tunisia. East of this area they are absent or extremely rare. To the west they are scattered as far as Morocco, where eight had been found up to 1937. The report of their occurrence on the islands of Hierro and Grand Canaria, where they were presumably written by the Guanches, seems incredible, but reputable authorities have translated an alleged inscription from Caleta, on Hierro, as "Spare me from annihilation by a javelin." On the mainland the Libyan inscriptions cluster within the area of Punic and Roman influence. In Morocco only one has been found as far south as Casablanca; all the others are in or near the Roman occupation zone in the north. Furthermore, a large proportion are accompanied by parallel inscriptions in Neo-Punic or Latin. Libyan writing thus seems to have been somewhat dependent on the Phoenician and Roman colonies.

The origin of the Libyan script is unknown. A few of the individual characters have been found in petroglyphs on the northern Sahara border, with animal drawings which are probably older than 1000 BC. Their patination is as deep as that of the animal figures, showing that they are approximately of the same age. Though these signs sometimes occur in groups of four or five, they often stand singly and therefore are probably ideographs, like cattle brands or property marks, rather than phonetic symbols.

None of the recognized alphabetical inscriptions can be assigned to an earlier date than the second century before Christ. From that time until its disappearance in the seventh or eighth century the Libyan alphabet seems to have been relatively stable. Its rectilinear style resembles closely the earliest known writing of the Aegean, Asia Minor, and southern Arabia. But in any one of these foreign alphabets or syllabaries only a few of the characters are similar to the Libyan,

and they are so simple in form that the similarity may be only a coincidence. Libyan writing shows no definite relationship to the Punic characters used by the Phoenician colonists of North Africa.

Nevertheless its basic principles evince a Semitic origin. It is strictly alphabetic and has no signs for the short vowels. One letter, the first in Table 1, corresponds to the Semitic *alif* as a bearer of an initial vowel or long A. When written horizontally the Libyan script runs from right to left like the Semitic. Some authorities have suggested that the letters may be related to the early, Asiatic forms of Phoenician, however dissimilar they may be to the Punic forms. But this suggestion leaves a large gap in time and space, for no intermediate alphabet has been discovered between Asia Minor and Tunisia, and the earliest datable Libyan inscriptions are centuries later than their supposed Phoenician relatives.

The most plausible conclusion we can draw from the above data is that the ancient Berbers learned the idea of an alphabet from Semitic neighbors but designed a new set of letters, some of which they derived from traditional marks of their own which originally had no phonetic value.

The Old Saharan alphabets are somewhat more similar to the Libyan than to modern Tifinagh though in general they resemble both of these very closely. Thirteen out of a total of twenty-four letters are either identical or recognizably similar to those of both the other alphabets and have the same phonetic values. Two are like the Libyan letters but dissimilar to their phonetic equivalents in Tifinagh. Two are like the Tifinagh only. Seven are unique. The values of several of the Old Saharan letters are still undetermined.

Inscriptions in Old Saharan are especially numerous in Aïr, the mountainous region in the south-central Sahara. They are rare in the more northerly massifs of the Ahaggar and Tasili, which are geographically nearer to the ancient Libyan inscriptions. Regional variations are well marked but have not been thoroughly studied. Those inscriptions which are thought to be the latest seem to represent a dialect close to the modern Tuareg of the Ahaggar. The few inscriptions known from the Ahaggar seem to be more similar to the ancient Libyan than are those in the south. At least two local variant alphabets have been reported from Aïr, distinguished by the absence in southern Aïr of certain letters common in the northern Aïr group.

Old Saharan inscriptions are usually found in association with drawings of animals, human figures, or weapons. The inscription expresses a simple wish, introduced by the phrase "I want" or "I need." The rest of the text states the thing desired, which is represented by the drawing.

From a historical point of view it is interesting that the ancient Libyan inscrip-

tions of Morocco are said to show special affiliations with this Old Saharan group. The solution of the whole problem of origin and relationships awaits further research on petroglyphs in central and western North Africa.

Tifinagh, the writing now used exclusively by the Tuareg, is closely related both to Libyan and Old Saharan. Marcy suggests hypothetically that it may be more similar than ancient Libyan to an original Berber writing from which both were derived. The earlier forms of Tifinagh should be sought in the northern Sahara where the Tuareg, in all probability, first learned to write.

In the Tuareg language the word *tifinaghen* means "signs" of any kind, whether natural landmarks or artificial symbols. Tifinagh is usually written horizontally, rarely in vertical or oblique rows. A few inscriptions run in sinuous curves or form circles which are nearly closed. As to direction, none seems to be preferred; right-to-left, left-to-right, upward, and downward are all common. In boustrophedon inscriptions the direction of the lines is not regularly alternate; it must be determined separately for each line. Concave letters are usually written with the concavity toward the beginning of the line, but they often face the opposite way. Inscriptions at the same site tend to run in the same direction. The more recent, which include Arabic names, are usually written from right to left, perhaps under Arabic influence.

Variants of Tifinagh, Old Saharan, and Libyan are shown in the comparative table. Tifinagh has ten letters not found in ancient Libyan but lacks nine of the Libyan letters and uses dots for several letters which were formerly written in strokes. Its composite forms for pairs of consonants, shown in Table 2, are a unique feature. The modification of phonetic values which has taken place between ancient Berber writing and Tifinagh has been discussed at length by Marcy. It seems to have followed variations in dialect, and certain letters have been modified to represent related sounds.

Modern Tifinagh is chiefly a woman's art, but the abundance of petroglyphs on caravan routes indicates that it was formerly used by men. It seems to be most current in the north; the southern Tuareg have almost forgotten it. Like its ancient antecedents it has probably never been used to write long texts. Most of the Tifinagh petroglyphs are merely personal names or avowals of love. Though the Tuareg are prolific poets, they seldom write their poems. Messages are occasionally sent in Tifinagh but its most common use is for names and brief epigrams on stone bracelets, rawhide shields, and other personal articles.

In medieval and modern times, other Berber groups have used only the Arabic letters for writing their language. Several books rivaling the Koran were composed by Berber heretics in Morocco within the first few centuries of the Moslem

period, but they were soon suppressed and lost. Later Berber religious texts have come principally from the Sus district of southern Morocco and from the heretical Ibadhite communities of Algeria and the Island of Jerba. In this connection it is interesting that Tuareg and Moroccan Berber dialects have a word *ara* or *aru*, "to write," which seems to be old Berber. The prestige of Arabic as the language of religion and culture has prevented the development of Berber literature and will probably continue to do so until the Berber language becomes extinct.

THE SHAWNEE MUSICAL STYLE: HISTORICAL PERSPECTIVE IN PRIMITIVE MUSIC

BRUNO NETTL

IT IS A FACT well known to the comparative musicologist, although perhaps less realized by the unspecialized observer, that the term "primitive" for music of preliterate peoples should not be understood to mean musical material which was constant in a historical sense, and stylistically simple and homogeneous. Although admittedly primitive music is useful in the search for the beginnings of music, it is unjustified to assume categorically that the music of peoples like the American Indians is close to this primordial state because it has not changed for thousands of years. Culture, at any stage, is assumed to have historical background. Historical changes in the styles of primitive peoples can be often inferred from inspection of the material and are supported by ethnological evidence of cultural interrelationships between various tribes and culture areas. However, the changes in the musical style, be they additions, deletions, or alterations, are usually difficult to trace back specifically to the actual source of change, whether we try to follow it in space or time.

It is in view of these considerations that the music of the Shawnee Indians is particularly interesting.[1] They were a tribe which migrated a great deal in the last three centuries, and consequently had contacts with many other tribes. Because of this, it may be possible to show intrusions of some musical style features from the outside. In addition, a part of the Shawnee, at least, seem to have had a minimum of direct contact with the Whites until recent times.

A short sketch of Shawnee migrations is pertinent at this point. They were originally a tribe of the eastern United States, belonging to the large Algonquian language family, most of whose representatives lived along the eastern coast of the United States, in northeastern Canada, and around the Great Lakes, with a few offshoots across the Mississippi River.

The first known contact of the Whites with the Shawnee occurred around 1680, at which time they were found in what is now western North Carolina and

1 I am indebted to Dr George Herzog for guidance in the preparation of this paper, and to Dr Erminie W. Voegelin for the use of her field notes in the compilation of material on the cultural background of Shawnee music. Dr Voegelin has also supplied material on the movements of the Shawnee and made valuable suggestions for the organization of this paper.

Tennessee. Kroeber's estimate for the Shawnee population about this time is a total of 3000.

Around 1700, part of the Shawnee were farther north, near the Delaware River and in eastern Pennsylvania. Thence they moved to Ohio and Indiana, in the middle and late eighteenth century; during the latter part of the same century some of the Shawnee moved to Missouri and Texas, where they had contact with some Southern Plains Indians. Those Shawnee who remained in Ohio later moved to Kansas. All are today living on allotments in Oklahoma. We know, then, that the Shawnee have had cultural contact with Indians of several culture areas, including the Eastern Woodlands, the Southeast, and the Plains; we also know a number of the specific tribes with which they had contacts.

The musical counterpart of this evidence may be the fact that we find in Shawnee music an unusually large variety within several stylistic features such as range, form, and rhythm. It is likely that the Shawnee absorbed some of these in the course of their contacts with other tribes. The definite establishment of such facts calls for a considerable amount of comparative work with collections from many tribes, which has not yet been done. So I must limit my conclusions about the music history of the Shawnee to pointing out the great stylistic variety in combination with many inter-tribal contacts and hope that further investigation will yield more concrete results. The following discussion is concerned with a description of the Shawnee musical style and culture, with only occasional comparative remarks, and a general attempt to put sub-styles into a possible chronological order.

Among the Shawnee, as among most Indian tribes, music had many functions, social and religious. Dance songs form the largest group in the material so far on record. Many of these are for social dances, named, according to the manner of performance, Lead Dance, Drum Dance, Stomp Dance, etc. Other social dances are named after animals, such as Wolf, Duck, and Alligator dances. Informants state that each kind of dance has its special songs which are not used otherwise.

Several religious ceremonies are held by the Shawnee, among them the Green Corn Dance and the Bread Dance. The Bread Dance is held twice a year and lasts four days. It contains several units which may be called dance or song cycles. This means that there are several distinct dances performed in a fixed order. Each of these has associated with it a group of series of songs; these songs are sung in a fixed order within each series. Aside from dance songs, we find gambling songs, love songs, songs in tales and myths, lullabies, and songs of the Peyote ceremony, a cult introduced to the Shawnee early in the 20th century.

The instruments[2] most used by the Shawnee are various kinds of rattles and the water drum. Bullroarers and buzzers are also known. The only melody-producing instrument is a kind of flageolet with eight finger holes, used as a love charm. This paper is concerned entirely with vocal music, since no flute melodies were recorded and no percussion was used with the songs which were recorded.

With the exception of a few scattered songs, there are no publications on Shawnee music as yet. Information in this paper is derived from transcription and analysis of a group of about sixty songs collected on phonograph records in 1934 by Professor and Mrs C. F. Voegelin.[3] All of the songs in this collection were sung by one person and without instrumental accompaniment, a situation not indicative of actual conditions. From ethnological sources we are able to learn, however, more about the manner of performance of the songs. Most of them had drum accompaniment, the drum providing an introduction for about half a minute. Rhythmic stamping of the feet takes the place of the drum in some dances. The rattle was also an instrument of accompaniment. The flageolet was used as a solo instrument. The bullroarer and the buzzer were not used with music.

Antiphonal singing, we are told, was known; this practice was probably borrowed from other Southeastern tribes, among which it was common. Among the Shawnee it is found only in the Lead dances, a group of social dances probably borrowed from the neighboring Creek Indians. Also the specific form it takes is that of the Southeastern tribes. It usually takes the form of short monotonic phrases which are repeated and varied antiphonally, and functions as an introductory section to melodies sung by the group.

THE MUSICAL STYLE

Melody and range. Two kinds of melodic movement are evident. Most common is a type which may be characterized by the term "undulating." This means that we find both rising and descending movement, but that almost invariably the end of a song is lower than the beginning. It must not, however, be confused with the cascading kind of movement evident in much North American Indian music west of the Mississippi, a type of melody in which ascending sections are

2 Cf. Erminie W. Voegelin, *Shawnee Musical Instruments* (American Anthropologist, vol. 44, pp. 463-475, 1941).

3 The five songs published with this article are offered as examples of the stylistic layers in the Shawnee repertory. The numbers they bear are those in the Voegelin collection at the Archives of Folk and Primitive Music, Department of Anthropology, Indiana University. Transcriptions are those of the present writer.

LULLABY (80c)
SONG FROM WINTER STORY (49d)
PUMPKIN DANCE SONG (4)
fine
may repeat here
GREEN CORN DANCE SONG (30)

PEYOTE SONG (524)
FINE
SPECIAL SYMBOLS: SLIGHTLY HIGHER LOWER
SLIGHTLY LONGER SHORTER
PITCH INDEF.
SOFT TONE
SLIDE
PULSATION
PITCH UNCERTAIN
PRESENT OCCASIONALLY

extremely rare. This type corresponds to the second type of Shawnee melody, a type which has so far been encountered only in the Green Corn Dance songs (No. 30: see illustration).

Much variety is encountered in the range of Shawnee songs. We find some with only a third, fourth, or fifth as the compass (No. 50c). This is found particularly in lullabies and story songs, indicating a probably archaic melody type. Most of the songs have a range comprising about an octave (No. 4). A third type has the range of about a twelfth (No. 30). The last feature occurs in songs which exhibit also a cascading kind of melodic movement, whereas the others have undulating movement.

As melodic intervals we find mostly major seconds, a large number of thirds and fourths, occasional fifths and octaves. There is no evidence of such "chromatic" phenomena as two minor seconds occurring in succession in the same direction.

On the other hand, intervals larger than seconds are usually succeeded by seconds. The final tone in a song is either the lowest or the next-to-lowest tone in the scale. Aside from the undulating and cascading melody types, clear-cut divisions do not emerge from this analysis.

Scale. Most of the songs have pentatonic scales, the tones of which are distributed evenly within the octave in seconds and thirds. Only a few songs show unevenly distributed scales, such as one empty and one filled tetrachord, a type of scale construction common in Plains Indian music.

Occasionally we find tetratonic and hexatonic (No. 4) scales, and, in songs of the small range type, ditonic (No. 49d) and tritonic (No. 50c) scales. In these latter songs, a fourth or a fifth is usually functioning somewhere, either as an interval or as the entire compass.

Form. A variety of forms is found in Shawnee music. The overall form of a song is usually strophic, that is, the entire song is usually repeated several times, sometimes with minor modifications, sometimes exactly. Apparently equal distribution of progressive, iterative, and reverting elements are found in the music.[4]

Many songs exhibit an over-all two-part form, the second part being a much modified repetition of the first. This is true particularly of some songs with meaningful texts, where the change in text might account for melodic modifications in the repetition.

A few songs are strictly isorhythmic (with small modifications), some repeat-

4 These terms are defined in detail in George Herzog, *A Comparison of Pueblo and Pima Musical Styles* (Journal of American Folklore, vol. 49, pp. 283-417, 1936), p. 305.

ing a long rhythmic unit, others a short sequence of as few as five tones. The melodic contour may or may not be similar in the various rhythmic units. In some songs, on the other hand, a melodic phrase is repeated and modified at various pitch levels, with only a general rhythmic similarity between the different sections (No. 30).

A few songs show a rather interesting type of alternation between various distinct motifs and phrases.

Among the songs simplest in range and scale, we find two types: the songs from stories tend to be through-composed (a short stanza, progressive in form, repeated several times), whereas the lullabies consist of a short motif of three to six tones repeated several times and followed by a different one as a cadence.

Lengthening of formal units at cadential points is exceedingly frequent. Songs usually end in a low tone which does not occur elsewhere in the song and is repeated several times. Thus, a great variety, from extreme simplicity to great complexity of forms is found, ranging from the simple lullabies to the very complex types like No. 52a, a Peyote song.

Rhythm. As compared with some other American Indian styles, for instance that of the Plains, the rhythm of the Shawnee songs seems more clear-cut and thus easier to analyze. In some cases, it takes the form of regular meter, such as 3/4 or 2/4 (No. 49d), but also 5/4, 7/4, and others. Combinations of these are also found, and, of course, modifications of the meter in certain positions such as cadential. There are usually not more than three different durational values in a song.

In the majority of songs we find what might be called a development of one or more rhythmic motifs. Sometimes this gives the effect of a freer kind of isorhythmic construction. The same sequence of rhythmic relationships is repeated with changes in the individual durational values. This phenomenon is well shown in several songs.

A more complex, less clear-cut kind of rhythmic movement is found in some, particularly the Green Corn Dance songs (No. 29). In these, it is more difficult to make subdivisions, units are less symmetrical, and more than the usual amount of syncopation appears. A considerable amount of pulsation on the longer tones is present, but not as much as in the Plains and Pueblo musical styles.

Texts in relation to the music. About one-half of the recorded songs have only meaningless syllables as a text. These are limited in number; they appear in peculiar sequences and are fixed within the songs.

The rest of the songs have meaningful texts which are supplemented by

meaningless syllables since they usually do not coincide with all the tones of a song. A considerable variety is shown in the placement of texts within the songs.

The most common way is to introduce the text in the modified repetition of the song, if that is part of the musical form. Occasionally the order is changed, the text appearing first and the meaningless syllables in the repetition (No. 4). The text is often not long enough to fill out the song or section of the song, and is followed by meaningless syllable sequences.

Texts vary in length from one word to a unit resembling in length a moderately long English sentence. In the case of a short text, a part of it or the whole may be repeated several times within the stanza. An example of this is a Peyote song in which the text, *hikalawilo,* is repeated some twenty times. The songs from stories are usually filled with text and contain few, if any, meaningless syllables.

We should mention a rudimentary kind of musical representation in one Shawnee song, especially since musical representation is very rare in primitive music. During the song, which deals with the Turkey, the words *tak tak tak,* imitating a turkey call, are sung in staccato fashion. This is different from many cases in which animal calls are imitated before and after songs, since it fits into the musical medium with respect to its rhythm, scale, and form.

HISTORICAL CONCLUSIONS

Several rather distinct types of songs emerge from this analysis. It is possible to make some tentative statements about the order in which these types may have appeared in the Shawnee repertory, statements which are based on the ethnological picture and known migrations, and which appear not illogical from a strictly musical point of view. Unfortunately there is at present no accepted methodology for reconstructing music history without the aid of non-musical facts. One tendency which is usually accepted is the progression from simple to more complex stylistic features. While this tendency is not always found, it may be said to have operated in perhaps eighty percent of the historically documented material of Western European music. The statements made here in reference to the music history of the Shawnee are in accordance with this tendency.

The style of the songs from tales and the lullabies, with their small range, simple form, and two or three tone scales has probably been with the Shawnee since their early days. This style is comparable to some of the most primitive music in the world and is widespread among Indian tribes in songs with just these particular functions, and not in other songs.

The most common song-type, with undulating movement, clear-cut rhythmic units, and about an octave range may date from the time of contact with tribes

of the southeastern United States, to which it is similar. This would involve the assumption that this type of music replaced an older general Shawnee song-type. It is found in the songs of the Bread Dance, the moccasin game, the Bean Dance, the Whiskey Dance, and the "Old songs sung in Ohio."

The songs of the Green Corn Dance, with large range, rhythmic complexity, and cascading melodic movement probably date from shortly before 1800, at which time the Shawnee had contact with some tribes of the southern Plains in whose music this style is common. The origin of the Green Corn Dance as a ceremony is not clear; according to Dr Erminie Voegelin, it is not, as the name implies, an exclusively agricultural ceremony. The name, which it shares with tribes of the Southeast, does not, then, indicate a Southeastern origin of that dance for the Shawnee, but probably a later intrusion.

The last layer of the Shawnee repretory is found in songs of the Peyote ceremony. Here there is no doubt whatsoever that an addition has been made to the Shawnee repertory. This style was brought, along with the ceremony, to the Absentee Shawnee (the first of the groups to settle in Oklahoma) within the last century, probably from tribes of the Plains and may have originated among the Apache, whose musical style is somewhat similar to the Peyote style. It is distinguished by a complex form, the use of only two durational values in the rhythm, a characteristic cadential formula, and meaningless syllable texts peculiar to the Peyote songs. This style is found in the Peyote songs of many tribes, particularly those of the Plains.

I have tried to describe briefly the Shawnee musical style and have attempted to outline the probable history of this style in a tentative way. It is believed that this type of inter-tribal exchange of musical material has gone on for centuries in American Indian music, and that in a primitive musical culture, as in all musical cultures, the change and addition of material is constant.

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THE RELATION OF IDEAL NORMS TO ACTUAL BEHAVIOR IN TARAHUMARA SOCIETY[1]

JACOB FRIED

THEORETICAL FRAMEWORK

THIS PAPER explores the degree of correspondence between (verbally expressed) ideal norms and actual behavior in Tarahumara society. It discusses the effects that variation from the ideal norms have upon interpersonal relations and the degree of tolerance toward such situations of variance; it also deals with the determination of the point at which sanctions are applied against such behavior.

Both Linton and Kluckhohn[2] have greatly clarified the nature of normative principles and their relationship to actual behavior by clearly differentiating between ideal constructs in the minds of anthropologists (called "culture patterns"), ideal norms in the minds of the members of a society, and the different levels of abstraction implied in dealing with *actual behavior* against which both previous concepts must be checked. Ideal norms are the moral evaluation of what is proper behavior, and must not be confused with the anthropologist's modal concept of culture pattern which is based upon observations of what most people seem to be doing rather than upon what the people being studied may feel *ought* to be done. Some sort of relationship between the ideal norms known to the members of the society and subsequent actual behavior must exist, but it need not approach a one-to-one relationship. Careful daily documentation of actual behavior will show that there are, beside the ideal norms mentioned by informants, usually alternative patterns or acceptable substitutes, though these may not be so clearly formulated by them as the ideal norms.

The stability of any society is dependent upon a high degree of correspondence between what people expect other people to do and what these people actually do. Part of these expectancies are based upon the existence of ideal

1 This paper presents some of the principal conclusions from a study of social control among the Tarahumara Indians of southwest Chihuahua, Mexico. The study was made possible by a Viking Fund Pre-doctoral Fellowship and a special grant from the Yale Department of Anthropology. Field work was carried out in the summer of 1950 and the first six months of 1951 in the following areas: Guachochic, Santa Anita, Norogachic and Creel.

2 Ralph Linton, *The Cultural Background of Personality* (New York, 1945); Clyde Kluckhohn, "Patterning as Exemplified in Navaho Culture" (in L. Spier et al., eds., *Language, Culture, and Personality*, pp. 109-130, Menasha, 1941).

norms. However, it should be recognized that the individuals of a culture group can be aware that real behavior does not *always* closely follow their ideal norms—that the "ideal" and the "actual" could and does vary. In fact, part of the expectancies that people have of others involve an understanding, and tolerance of, some degree of variation.

In the case of the Tarahumara it will be shown how actual behavior varied considerably from certain ideal norms these people are well aware of. In some cases this discrepancy seemed to be ignored, or tolerated, yet the very same behavior under different circumstances resulted in the imposition of a severe punishment. It must be noted here that not *all* ideal norms in Tarahumara society permit of the same degree of leeway in behavioral variation. Certain ideal norms, those dealing with theft, homicide, direct defiance of the authority of their own native officials, are more rigidly treated. The focus of attention here is on the problem of variance, hence the ideal norms chosen are selected ones and thus do not indicate that all ideal norms are flexibly treated in this society. The existence of what Linton has termed "real culture patterns" at variance with, or differing significantly from, verbalized ideal norms cannot be dealt with here and will be the subject of another theoretical article.

Briefly, Tarahumara society is seen as *permitting* a considerable flexibility in some areas of behavior, so that it runs counter to stated ideal norms, in order that its members can adjust to the variable conditions and exigencies of their daily lives. However, should such behavioral variation lead to interpersonal *conflict*, then the ideal norms, previously ignored or so flexibly skirted, become transformed into *legal norms*[3] and sanctions now can be applied to bring the behavior into line with them. The imposition of sanction is always couched in terms of ideal norms. Social pressures to comply to ideal norms are not automatically exerted when there is a "deviation" in behavior (such deviations being too frequent as well as necessary, due to circumstance) but only when such a deviation results in interpersonal conflict.

Thus in Tarahumara society ideal norms have a double aspect. On the one hand, they seem to lie dormant and permit of considerable avoidance, but on the other hand, under situations of conflict, suddenly expose a latent aspect of demanding conformity. The reason for this transformation seems to be in the nature of the conflict-sanction situation that now calls for a clear-cut decision in

3 Hoebel pointed out that a social norm can be treated as a legal norm if its neglect or infraction brings an application of force by some social agency (E. Adamson Hoebel, *The Political Organization and Law-ways of the Comanche Indians*, Memoirs, American Anthropological Association, no. 54, 1940, p. 46).

settling disputes on the part of sanctioning agencies. The ideal norms as legal norms in the hands of the sanctioning agencies become the guiding points of reference in decision making and, as such, must be held out as single standards of behavior in a more or less arbitrary fashion.

THE TARAHUMARA

The Tarahumara, who number some 45,000 persons, do not form a politically cohesive group. The basic social unit, the nuclear family, is characterized by a high degree of spatial mobility and by strong economic and social self-sufficiency. These families live in isolated, scattered rancherias. Their social contact with others is restricted by a seasonal mobility pattern which causes many families to move from mountain to canyon. The basic territorial unit is the pueblo, which encloses an area of some fifteen miles in radius. The people of each pueblo convene at certain intervals to participate in religious festivals, bring grievances and disputes to be settled, and to attend such events as foot races. Pueblo affairs are controlled and directed by a body of elected officials. The native officials who concern us here are the gobernador and the mayor. The gobernador conducts trials, settles any disputes brought to him, arranges the religious ceremonies, delivers sermons on proper behavior and arranges divorces and property inheritance. The mayor specializes in conjugal affairs, solves domestic quarrels, punishes children who are out of hand, and acts as match-maker in marriage situations.

IDEAL NORMS AND ACTUAL BEHAVIOR

The discovery of the ideal norms of Tarahumara society is by no means a difficult task. Despite the fact that these people live in isolated rancherias, are jealous of their privacy, and reticent to express themselves verbally, there are numerous occasions on which they come together for such activities as communal feasts or working bees, and special Sunday reunions. It is a special feature of any such gathering that they are harangued in sermon fashion by their own elected native officials on general deportment and proper behavior. These sermons and admonitory speeches are in essence the verbalization of ideal norms, and an analysis of the contents of sermons delivered at these convocations serve as an excellent source of ideal norms which can be checked with any informant. The Tarahumara are well aware of the ideals of behavior of their culture since they are exposed to them from childhood with such repetitiveness that they all can repeat the essential content. Furthermore, these native officials conduct public and formal trials in which they treat a wide range of disruptive behavior such as

theft, divorce, desertion, mistreatment of children, inheritance settlements, and brawls; these being the most typical kinds of interpersonal conflict. These officials utilize such cases as object lessons to impress upon the assembled people the proper way to comport themselves in their interpersonal dealings in such situations.

It is clear from the number of disputes or conflicts that need adjudication by the native officials that the knowledge of ideals of behavior is not sufficient in itself to bring conformity to such ideals; furthermore, under certain circumstances, conformity may not always be considered desirable or practical.

In order to illustrate the variable relationship that can exist between ideal norms and actual behavior, three common types of interpersonal problems that can occur within the Tarahumara family are given below: the sexual division of labor between the spouses, the dissolution of marriage, and the area of child punishment.

1. The ideal norms of the division of work and responsibility within the household are clearly set forth in sermons. Agriculture and woodsmanship is men's work; care of the house and children, women's. However, in several rancherias it was noted that what men stated as women's work was occasionally done by a man, and similarly, women were observed doing men's work. Specifically, a certain Bernabe Acosta was observed weaving reed baskets, sewing shirts, cooking; another, Jesus Torres, ground corn, looked after the children (ages 2 and 4) while his wife herded goats. On the other hand, a certain María occasionally took a hand at yoking oxen and plowing, constructing corrals, and was on several occasions seen hoeing corn while her husband brought the drinking water.

None of these cases resulted in any personal conflict. Of course, these individuals were aware of a temporary switch in roles. In each case the reason for the switch was easily explained by the informants involved. In one case it was a desire for novelty, a sudden whim; in another, an actual need for additional labor not otherwise available that made a woman aid a man in agricultural work, or a man assist in household tasks; or sometimes one was already occupied, so a sex-linked task temporarily passed over to the other, e.g. the woman was herding goats, so the man watched the household property in her absence.

This flexibility of role behavior is very necessary for a people living in isolated households composed of simple families with limited man-power resources. Involved are variable factors such as the presence or absence of young or grown children who can lend aid, the actual abilities, skills, and personal likes of each spouse, and their immediate availability close to the home to be of aid: all these create special conditions calling for informal stop-gap measures and informal role

inversion. The important point here is that a man or woman is willing to take over the "duty" of the other (woman plow or man take care of children) if good interpersonal relations characterize the union. But because the ideal norms of a work division are explicit, a man or woman has the right to refuse to shift roles even temporarily. Complaints to the native officials couched in terms of violations of work expectancies are frequent. A man can refuse to care for children on the grounds that this is women's work. Either spouse has a right to complain to the gobernador of the "laziness" of his or her mate. One of the most typical kinds of cases tried by gobernadores concerns itself with the irate man who complains that his wife has neglected to prepare his food so that he was forced to do it himself. In such a case the governador harangues the wife in a formal sermon, reminding her of her duties.

The woman cannot reply, "Look here; he has been preparing his own food now and then like most men for years and never complained before." Once a complaint is brought to the gobernador, then the ideal norm of work division is taken literally.

From this example we see that conformity to the standards of a sexual division of labor depends upon a series of circumstances that may make it, on occasion, useful or necessary to ignore these standards. However, in the event that one spouse makes a practice of switching or avoiding roles beyond the situation that the other one deems necessary, or is willing to permit, then such behavior may be then termed "laziness," i.e., deliberate avoidance of duty, and the plaintiff is considered well within his rights to ask to be relieved of such a spouse.

Lorenzo Martinez' wife left him for another man. She was disgusted with Lorenzo because he proved lazy, had little land and few animals. The gobernadors decided that she was justified in her behavior because Lorenzo was indeed known to be lazy and useless to her.

We pointed out earlier that conflict was not a necessary reaction to either the breach or ignoring of some ideal norm, but more often a result of unpleasant consequences stemming from the behavior. In one case narrated by a native official a woman had violated the ideal norm that demands of a woman that they stay home and protect household property. This woman had left the house unguarded in order to borrow some salt from a neighbor, thereby permitting a coyote to make off with some chickens. This so enraged the husband that he deserted her. He defended his behavior on the grounds of the enormity of her breach of duty; certainly he would never have dared desert her simply on the basis of her having left the house unguarded had the chickens not been taken. He was clearly bank-

ing on the rules to protect his desire to be rid of this woman. This is also a very effective example of manipulating ideal norms to ulterior ends.

2. The ideal norms with reference to marriage and divorce are clearly set forth in the sermon given the newly married couple. Only the native officials may decide whether there are sufficient grounds for a separation. Desertion is punishable as a serious offense. Such cases as the one below are among the commonest types of problems handled by the native official.

> Ignacio had lived with the plaintiff for some weeks when he decided he liked another better. He lived with this second woman for eight months without returning to his first wife. But she still refused to give him up. Finally this first wife complained to the gobernador.
>
> Ignacio was brought to trial. The wife testified that she could not get along without a man to help her work, and that she suffered hardships because of his absence.
>
> Since Ignacio had no good reason to offer for the desertion, he was forced to return to her. He was also whipped and sentenced to two weeks of labor.

In practice if a man and wife find that they cannot make a satisfactory adjustment to their marital situation, they may simply separate by mutual consent. However, should one of them refuse to give up the services rendered by the other, as in the case above, or be unable to find another marriage partner, then an activation of the ideal norm that spouses may not leave each other without consent of the officials, previously unheeded, now occurs. A complaint in terms of the ideal norms is made to the gobernador, who then can take direct action.

3. Tarahumara children often run away from home because of some grievance, perhaps a beating received, a harsh scolding, or simply out of the desire to change the environment. They stay at the home of an uncle or grandparent for several days and then return to their parents; or they may fully intend to remain away permanently. In some cases the child remains away and the parents make no attempt to retrieve the child. Should the parents later need the labor of the child in spring planting or summer weeding, they then may call upon the mayor, whose duty it is to watch over the conduct of errant children, to bring the child home. Then the child is liable to punishment for staying away. The ideal norm concerning such behavior requires the children to be obedient to the will of their parents. The point is that children who run away are sometimes permitted to stay away. That is, the running away of the child does not immediately bring the mayor into action.

In spite of what has been said above about the considerable degree of variability of behavior from ideal patterns within certain frameworks, it must be

stated that ideal norms really do heavily influence actual behavior. Individuals may lapse temporarily in their behavior from known ideal norms but they generally return to socially approved forms. Usually the native official can check behavior complained of by warnings. For example, during one native ceremonial a woman complained to the gobernador of the laziness of her husband. The gobernador harangued the offender in this manner:

> These things I am advising you because I would spare you these words before all the people [a trial]; because what you do makes me ashamed. You know that you do not work as you should. From now on work all the time. Believe me that I give you good advice in these words.

Thus a man will not ordinarily make a practice of beating his wife for he knows that ideal norms prescribe that the proper way to deal with individuals is through the advice-giving pattern. Even harsh criticism of the scolding variety is to be avoided. Should reasonable advice to the wife fail to have effect, the spouse must refer the dispute to the native officials in whose hands all power of physical punishment lies. Likewise, a scolding or nagging woman can be legitimately divorced, should she continue her abusive practices. For it is against the ideal norms continually to nag and harry another. One must not be excessively "ill-tempered."

Similarly, harsh punishment of children is not permitted. Every Tarahumara knows this from sermons: "Do not act badly with your sons and daughters; . . . it is not right to beat your children." And in fact the Tarahumara parent will not ordinarily beat a child unless the child has committed some specially outrageous act, such as losing a cow or goat through negligence.

The attitude of the numerous native officials interviewed was generally that they were not so much watchdogs of ideal norms as preservers of harmony and settlers of disputes. The relation of actual behavior to the Tarahumara ideal norms does not have anything in common with a demand for absolute adherence to custom. When the gobernador counsels people on the standards of behavior, he does not simply repeat empty formulas that must be followed blindly. The sermons of the officials are very often composed of current incidents in order to show by examples why it is necessary for the people to follow the rules of behavior they advise. The moral drawn by the gobernadores from the admonitory speeches is always that the people will be happy and peaceful if they follow their advice, and this advice is always practical and reasonable rather than dogmatic.[4]

4 These admonitions, because of Catholic Christian influences, are couched in clichéd terms of Christian theological doctrines with threats of supernatural sanction; still, threats of punishment by native officials themselves are always included and in terms of effectiveness, the latter is more persuasive; the former is considered good oratorical stylization.

The gobernadores make every attempt to correct behavior that is likely to cause a dispute before punishment is necessary. Punishment is not to be automatically prescribed for the breaking of some inviolate code.

When punishment is meted out, it is not because an ideal norm has been violated but often only after the person refuses to discontinue certain behavior. (This does not hold for such cases as theft or homicide.) Though it is the duty of the native official to resolve any dispute brought to his attention, he does not have publicly to punish the person accused if informal counsel can change the behavior. An excellent example of this is the case reported by the mayor of Samachique who received a complaint from a mother that her son and daughter were having an incestuous affair. The mayor sent ahead a warning to these siblings to seek other mates lest they be brought to trial and punished. He was implying that they could avoid punishment for their act if they changed their ways.

Now we are prepared to answer the question of why only behavior leading to *unresolved* disputes need be brought forcibly into line with ideal norms. Temporary states of conflict between individuals may be frequent and still not threaten a general collapse of interpersonal relations. For example, in a marital situation the occasional resort to blows, scoldings, failures to prepare meals or bring firewood does not mean that the marriage is a failure. Even a considerable frequency of such behavior in itself does not directly signify a complete failure of ideal norms to influence behavior. In the study of cases of such lapses from ideal behavior it is seen that the ideal norms are indeed immediately implicated. One of the first things a spouse does in reaction to such a lapse is to harangue the other—fall into the advice-giving pattern prescribed as the culturally accepted way of influencing others. The "advice" is always an appeal to ideal norms.

Thus behavior in violation of ideal norms which leads to a *temporary* condition of maladjustment or conflict is not necessarily a serious threat to stability of interpersonal relations, and forceable means of bringing the behavior into line with them are not necessary. The threat of sanction by native officials in itself is sufficient usually to bring about a change in the behavior. Since all persons know quite consciously in most situations what behavior is required of them, they will avoid having their conflicts brought to public adjudication, for they know in advance how they will be judged. Thus knowledge of ideal norms in themselves have a stabilizing influence even when unsanctioned behavior is *permitted* or suffered to continue by others. That is, Tarahumara know that there is a limit to permissible variation. The concept of a "limit" is to be defined with reference to both the situation and actors involved. A mild, long suffering woman will permit her husband to bully her for years, whereas another woman will react

violently to the first beating and immediately invoke the ideal norms. In one case the woman may feel the beating to be deserved—she lost the chicken; in another, consider it an unjust punishment. A definite distinction must be drawn, then, between conflict situations which may even be frequent, yet are resolvable by informal adjustment between the individuals involved, and those conflicts that cannot be resolved by the individuals. The limit of variability from ideal norms in Tarahumara society then can only be defined with reference to a point at which at least one individual involved decides to put a stop to such behavior. When the advice pattern fails, the only alternative is for the individual to lodge a complaint with the native officials who will then adjudicate the dispute in terms of the ideal norms. In a formal sanction situation (a trial) the actual flexibility of real behavior is ignored. A Tarahumara cannot plead during a trial that most people have at one time or another committed adultery, or beaten their spouses, or failed to do some household task. The fact that others have committed these faults with impunity is no mitigating factor. In the trial situation the ideal norms show their rigid aspect. They are handled as legal norms by the native officials. Their specific application is now geared to resolve specific conflicts. In such a context the ideal norms are treated as a single standard from which deviation is a yes or no consideration for the judge.

There is good reason why in Tarahumara society the trial situation must be kept distinct from the daily living patterns that the Tarahumara individuals must work out between themselves—hence the dual aspect of treating variability in behavior from ideal norms. Freedom from rigid behavior patterns is a necessity for these people who live in isolated farmsteads, who are faced with special contingencies not easily resolvable by stereotyped and limited permissible reactions. Because of the isolation of the family units most problems faced by the Tarahumara are between *individuals*, especially those between spouses, or, with specific individuals of different households. Thus disputes are localized or contained. There are no villages, clans, or extended families to be drawn into feuds. Individual conflict here does not threaten society as a whole, so that "society" has no immediate interest in keeping down conflict by enforcing rigid adherence to ideal norms. It is for this reason that native officials do not try to discover or seek out wrong-doers, "violators" of ideal norms, in order to punish them. Rather, native officials wait until a complaint is brought to them before they take formal action against any individual. Informally they may warn such a person, raise the threat of formal sanctions, but usually they take no direct measures. True, the gobernador warns the people not to break ideal norms, but he does this merely to help the people avoid conflict by offering them a workable set of rules of

behavior—behavior that is useful, not behavior to be followed for its own sake.

Here are the words of one mayor (Samachique Pueblo) to this effect:

> There are many bad things, but people do not complain. If they complain to me, then I must do something. If not . . . we can only give advice and warn the people not to do these things.

CONCLUSION

The concept of a rigid legal aspect latent in the same ideal norms that are treated loosely in actual behavior is the most significant aspect of this study. Variation from ideal standards of behavior in practice does not bring a sanction until it causes unresolved interpersonal conflict. When this behavior, which might previously have had tacit approval, became intolerable, a shift in the relationship between ideal norms and actual behavior occurs. Thus, if conflict occurs because toleration of the given behavior breaks down, then judgments refer back to ideal norms as a *corrective* point of reference. It is this latent quality of ideal norms that permits the flexibility of behavior required under Tarahumara conditions. Behavior can vary from ideal norms to fit variable situations. At the same time those variations which result in conflict can be controlled if necessary by the use of the same ideal norms as legal norms applied by special native officials.

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SOME CROP DISTRIBUTIONS BY TRIBES IN UPLAND SOUTHEAST ASIA

GORDON D. TAYLOR

THE PURPOSE of this paper is to map the distribution of some of the crop characteristics of native upland agriculture in southeast Asia. Areal basis for the study has been tribal boundaries, as closely as these can be mapped from available information and on the map scale used. Location of the tribal units is indicated in Figure 1. It seemed that a contribution to our knowledge of native peoples of southeast Asia might be made if their crop complexes could be shown in such a way that a ready comparison could be drawn from one group to another. Thus, the accompanying maps, which form the principal part of this article, are an attempt to portray distribution of crops by tribal units.

There is at least one major limitation to this method of study and that is that it shows a crop distributed uniformly over an area where in actuality climate, soil, topography, and other conditions might make the growth of that crop impossible in parts of the district. Therefore, in each tribal area where a crop is reported to occur it should be thought of as being cultivated where physical conditions are suitable. The maps should be interpreted in light of this limitation. A further study which could locate the actual distribution of crops would be a valuable addition to our knowledge of the area.

The books and articles listed in the bibliography provided the basis for information used. Pertinent data obtained from these sources were recorded on charts, a sample of which is given in the following table. Maps of tribal areas were drawn, and the information shown on the charts was transferred to them.

Sample Data Chart—Crop Occurrence: Corn

Tribe	*Reported*	*Not Reported*	*Status Unknown*
Miri	+	—	—
Khasi	+	—	—
Kadu	—	+	—
Gauri	—	—	+

Note: The category "not reported" as used in the above chart and on the maps indicates that in the consulted sources the crop was either not mentioned at all or specifically mentioned as not occurring. It would have added much to this study if sufficient data had been available to differentiate between these two cases.

Southeast Asia has been taken to include the following areas: Assam Hills of India, Burma, Thailand, Malaya, and French Indochina. Uplands can be defined in numerous ways, but for this study they can be said to include all the area of mainland southeast Asia with the exception of major river plains and narrow coastal margins. These areas have been indicated as "Lowlands" on the maps.

Upland southeast Asia is drained by the Red, Mekong, Menam, Irrawaddy, and Brahmaputra rivers and their tributary streams. Each river system is separated by a series of mountain ridges with a general north-south trend. These ridges make east-west communications difficult, and also give rise to a variety of climatic conditions. In two areas—the Shan Plateau of eastern Burma and the Korat Plateau of Thailand—the highlands tend to level out into country less rugged than is general in upland southeast Asia.

Differences in culture which occur in this area cannot be adequately described here. In general there exists two broad culture areas in southeast Asia. In coastal areas and in areas readily accessible from the coast, the native peoples have been affected to a great degree by culture influences emanating from India, except in Annam where Chinese influence has been paramount. Back from the coasts and in the less accessible areas, there is a grouping of peoples with an Indonesoid culture.

Within the upland area four types of agriculture can be determined. These are as follows:

(a) Shifting agriculture, where the land is cleared by a process of slash-and-burn, and, after being cultivated for a year or two, is abandoned. Within this broad category two sub-types can be identified. There is shifting agriculture proper, which is a truly migratory system where both residences and fields are moved frequently; and land rotation, where residences remain more or less fixed and land use is rotated within a given cycle. Insufficient data were available to break down and map these two systems for all peoples. As a result, only the major category has been shown on the map of types of agriculture (fig. 2).

(b) Irrigated agriculture in mountain valleys, where terracing is an essential feature of the process.

(c) Transition types, where a tribe may practise both shifting and irrigated agriculture.

(d) Plantation agriculture, where European capital and management have been applied to the problem of producing crops for more temperate markets. As this is a European development, it will be outside the scope of this study, which is concerned solely with developments by indigenous peoples.

FIG. 1. Tribal locations in Southeast Asia. Key to numbered tribal locations:

1. Aka
2. Dafla
3. Miri
4. Aba
5. Mischmi
6. Garo
7. Lynngam
8. Khasi
9. Synteng
10. Mikir
11. Lalong
13. Rengami
14. Katschari
15. Katicho
16. Angami
17. Mao and Mitim
18. Thado
19. Kabui
20. Tangkhal
21. Taman
22. Lhota
23. Ao
24. Tachong
25. Yachu-Kni
26. Sema
27. Konyak
28. Kalgo
29. Hkamti
30. Laschi
31. Tsi
32. Kado
33. Hpon
34. Gauri
35. Paluang
36. Lolo
37. Akha
38. Lahu
39. Riang
40. Tipura
41. Chittagong
42. Luschei
43. Arakan
44. Koo
45. Lamet
46. Nung
47. Muong
48. Putai
49. Man
50. Meo

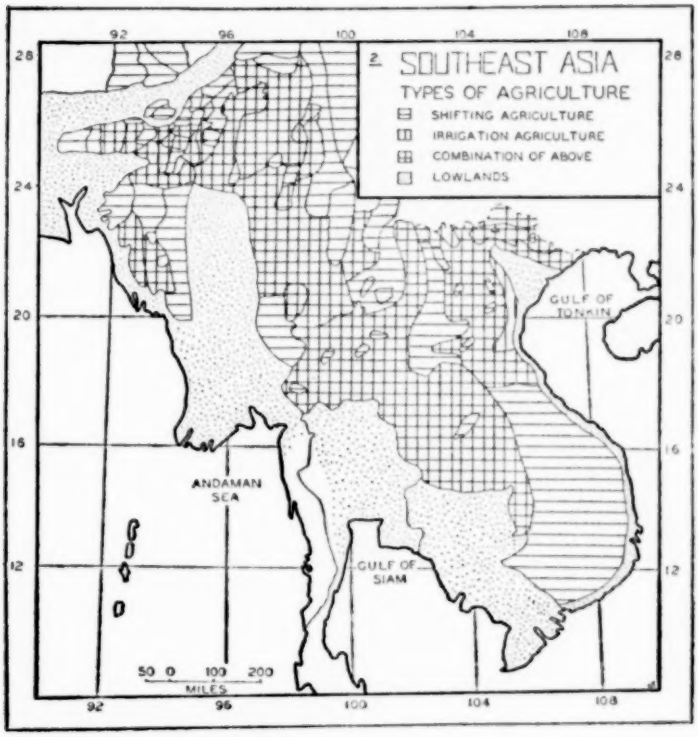

FIG. 2. Distribution of types of agriculture.

Only a few of the many crops grown in southeast Asia have been selected for study. Care was exercised to ensure that examples of Old World and of New World domesticates were used. Rice, millet, yam, taro, and Job's tears are the Old World crops studied, whereas American corn, white potatoes, and tobacco are examples of New World plants.

(a) *Rice.* Rice, which probably originated in India, was not mapped, as most of the peoples in the area cultivate it either by irrigated or dry field methods. Only a few of the Naga tribes, such as the Mishmi, do not raise rice because they live at too great an altitude for rice to mature in the prevailing climate. For a

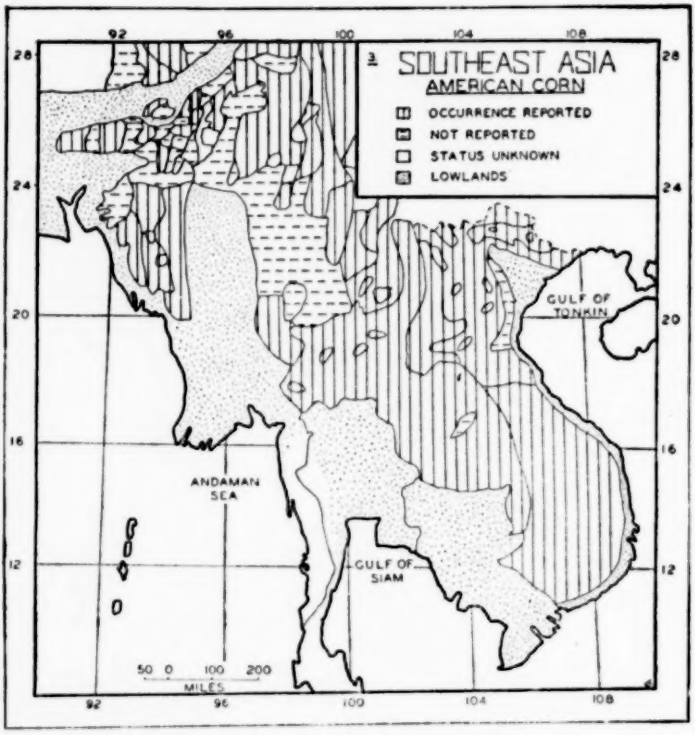

FIG. 3. Distribution of American corn cultivation.

similar reason rice is not a major item of diet amongst a few of the other Nagas although they do cultivate a little.

(b) *Millet.* Millet is another crop which is widespread in its distribution throughout upland southeast Asia and for this reason was not mapped. Although grown in many places, millet is much less important than rice in the local economy and in the tribal ceremonial life.

(c) *American corn* (fig. 3). American corn was selected for study as it is the New World food crop with the widest distribution in southeast Asia. There are two schools of thought with regard to the date of introduction of corn into

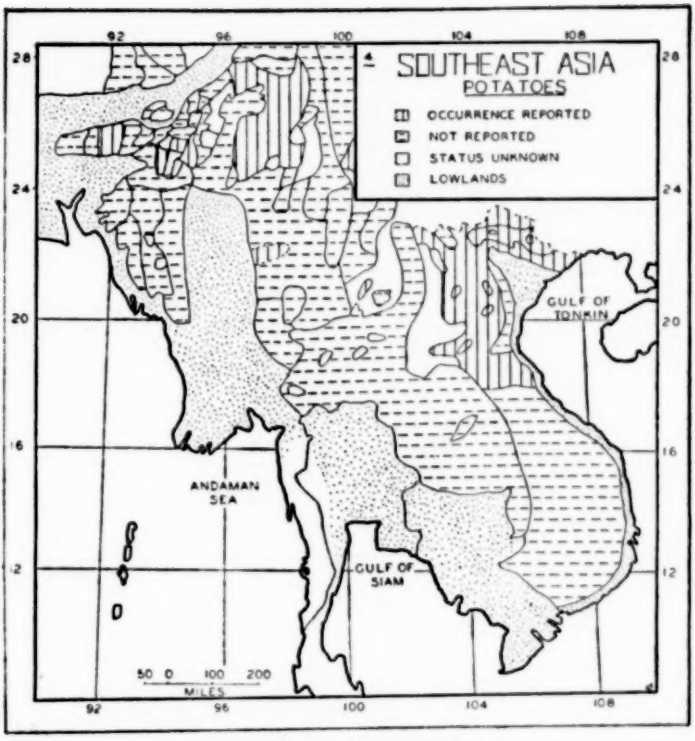

FIG. 4. Distribution of potato cultivation.

south and east Asia. Some scholars such as Sauer[1] argue for a pre-Columbian introduction, whereas others favor a post-Columbian date. Some clue to the direction of diffusion of corn may come from a consideration of its present distribution. It is much more prevalent in the eastern half of upland southeast Asia than in the western. Its concentration in districts inland from the Annamese coast and in those near the present Chinese border may indicate that corn spread into southeast Asia predominantly from China.

(d) *White potatoes* (fig. 4). The white potato is another New World crop, but it has not gained the wide distribution of corn. This plant has not won great

1 Sauer, *Agricultural Origins and Dispersals.*

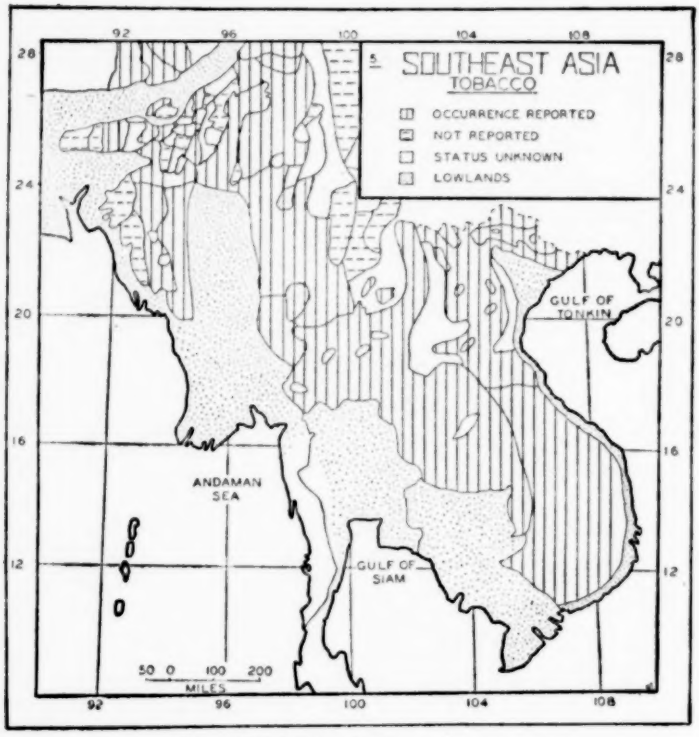

FIG. 5. Distribution of tobacco cultivation.

favor with the native peoples, especially in the rice-growing areas. Introduction of potatoes seems to have been brought about as the result of efforts of individual missionaries rather than by a diffusion from any particular center, e.g., to the Khasis about 1830 and to British Burma from the United Kingdom about 1882.[2] Thus the crop is a recent addition to the agriculture of this area although it had been grown in India for at least one hundred years prior to moving into southeast Asia.[3]

The introduction of potatoes into Shan lands, where it is found in a localized

2 Laufer, *The American Plant Migrations: Part I, The Potato*, p. 93.
3 *Ibid.*

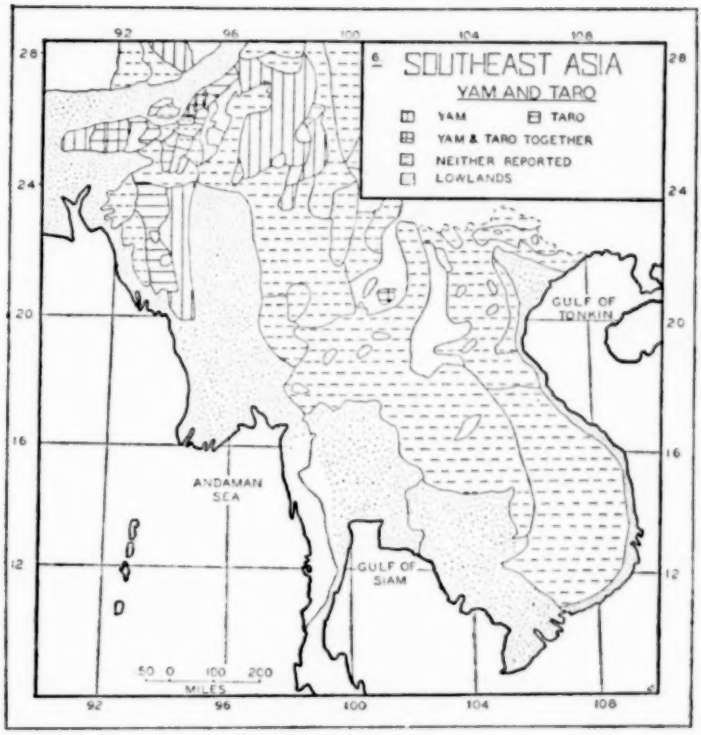

FIG. 6. Distribution of cultivation of yam and taro.

area, can be attributed to construction of a railroad which provided local farmers with a means of shipping the product to urban markets of lower Burma. In this area and possibly among some of the Assam peoples potatoes are grown as a cash crop, although elsewhere they appear as an integral part of subsistence agriculture.

(e) *Tobacco* (fig. 5). Tobacco was selected as an example of a New World non-food crop that has been introduced into the area. Of the three American crops studied, it has the widest distribution. The fact that a crop, which brings with it a new culture complex, has spread to more peoples than have food crops

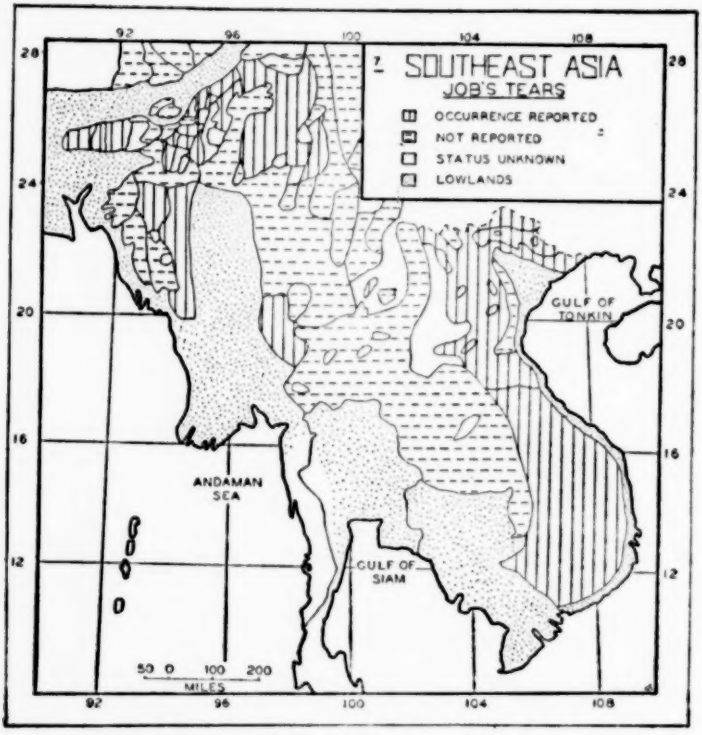

FIG. 7. Distribution of Job's tears cultivation.

raises some interesting questions regarding selectivity of cultural traits. These questions, however, go beyond the scope of the present article.

Tobacco spread into Asia along three routes of migration:

(1) from Mexico to the Philippines, thence to Formosa and China, and from China to adjacent areas;
(2) from Europe via the maritime route to India, Java, and Japan;
(3) from Russia across Siberia.[4]

The plant *nicotina tobacum* was known in China and India early in the 17th

4 Laufer, *Tobacco and its Use in Asia*, p. 17.

century.[5] It is to the Chinese that credit must go for the diffusion of tobacco over much of Asia. The case for the Chinese has been stated as follows: "The Chinese with their mercantile interest became the most active propagators of tobacco and smoking all over Asia."[6]

(f) *Yam and taro* (fig. 6). Yam and taro, which are native root crops, are a feature of the western part of upland southeast Asia, especially amongst some of the Nagas and other peoples of western and northern Burma. In general, the distribution is spotty and seems largely confined to higher areas and to Indonesoid groups rather than to lower areas and peoples affected to a large extent by Hindu or Chinese civilization.

(g) *Job's tears (coix lacryma-jobi)* (fig. 7). Job's tears is a native grain crop which is grown by shifting methods of cultivation and is generally found in higher areas where other grains such as rice and corn will not mature. The crop also appears to be a feature of the agriculture of the sub-stratum peoples.

CONCLUSIONS

From a study of the maps it seems evident that the peoples of upland southeast Asia have had their major contacts with the outside via the lowland areas. With few exceptions, the distribution of non-native crops seems to indicate that they have spread into the uplands from the more advanced lowland areas. This observation seems to be further borne out by the map showing types of agriculture. In general, shifting agriculture is still practised by peoples farthest removed from lowland areas by distance or accessibility, whereas irrigated agriculture has been penetrating along the major river valleys into upland districts. In some areas, especially in parts of French Indochina, the recent introduction of irrigation agriculture is well documented.

Another generalization that can be made from the maps is the tendency of some peoples toward a one-crop agriculture, whereas other peoples have a reasonably well diversified crop system. The Shan peoples are an example of a one-crop system. Of all the crops selected for study and mapped, only potatoes—and that in a limited area and as a very recent introduction—are reported to occur in Shan areas. On the other hand the Kachin peoples to the north of the Shan and in a more inaccessible area have a better diversified crop system. They have accepted corn, potatoes, and tobacco from the outside and still maintain cultivation of many native crops. The Shin peoples to the west of the Burma Lowland are

5 *Idem*, pp. 3, 11.
6 *Idem*, p. 15.

similar except that they have not as yet accepted the potato and an irrigated system of agriculture. In general it might be said that the sub-stratum peoples grow a wider variety of crops than do peoples influenced by Hindu and Chinese culture.

It would seem that in this study of crop distributions, where native and non-native crops have been selected for attention, that we have one method of ascertaining the readiness of a culture to accept ideas and material objects from outside sources. Where introduced crops have been rejected, or at least not accepted, we may have a culture which is tightly knit and oriented inwards upon itself, whereas, on the other hand, a people who have accepted many crops from other areas may provide an example of a culture more pliable and more ready to accept change. On the other hand the time element must be considered. Where a variety of native and non-native crops are grown side by side, the introduction of new crops may have been quite recent and the people concerned may not have had sufficient experience to enable them to decide which crop to keep and which to discard. Local physical conditions may provide an environment not suited to a new crop. All factors considered, however, crop complexes are a part of cultural change and must be recognized as such.

Another interesting feature can be determined from studies of this nature. In southeast Asia, throughout history, movements of peoples have tended to be from north to south, whereas the more recent migration of ideas and objects tends to be in the opposite direction.

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WINNIPEG, MANITOBA

THE WEIGHTS OF CHIPPED STONE POINTS: A CLUE TO THEIR FUNCTIONS*

FRANKLIN FENENGA

INTRODUCTION

THE PROBLEM of identifying the functions of chipped stone points by means of criteria of size has concerned many archaeologists. Evidence of interest in the matter is implicit in most cases, but the subject has been mentioned in print occasionally. The following examples are representative of the point of view most frequently expressed:

> These [projectile points] will be discussed in two categories: (1) small, thin, light, finely chipped specimens believed to have served on arrows; and (2) larger, thicker, heavier and more crudely chipped specimens we believe were used on darts thrown with atlatls. That such a division actually existed over vast areas of America is no longer denied by many archaeologists. The arguments are rather over the precise lines of division, and it is true that "intermediate" points exist which might have served with either weapon.[1]
>
> There is reason to believe that the bow came into use in the New World in relatively recent times, and that prior to its introduction, or much less probable local invention, the spear-thrower enjoyed continent-wide distribution in both Americas. These suppositions are based on the apparent total absence from all respectably ancient deposits of small, light points suitable for the tipping of arrows; and, conversely, by the presence in such deposits of larger points, of sizes and weights appropriate for service with the heavier, longer darts propelled by the spear-thrower.[2]

This generalization by Baker and Kidder was challenged by Jim Browne, an archer of practical experience;[3] then Kidder, in a carefully worded reply, outlined the whole problem.[4]

> My reasons for expressing the above belief regarding the large points were (1) that all prehistoric stone-headed arrows so far found in the Southwest bear points weighing less than 35 grains [2.27 grams, F.F.]; (2) that at Pecos and other former settlements of the arrow-using Pueblo peoples there occur hundreds of points of comparable weight for every one of large size; (3) that in Pueblo sites such large points as have been found hafted have usually been set in short handles for use as knives,

* Published with the permission of the Secretary of the Smithsonian Institution.

1 Newell and Krieger, 1949, p. 161.

2 Baker and Kidder, 1937, p. 51.

3 Browne, 1938, pp. 358-359.

4 Kidder, 1938, pp. 156-157.

but never in arrows; (4) that small points, which can hardly have been other than arrow-heads, appear in great quantities among the bones of slaughtered buffalo in the trap-ravines of the Great Plains, while on the other hand, the heads of all Basket Maker spear-thrower darts that have come to light are much larger and heavier than those which we can be sure were arrow-heads. I had, of course, considered the possibility that the ancient heavy points, from Folsom, Signal Butte and elsewhere, were arrow-heads, but I was unable to see why, if they were serviceable for that purpose, they should have been replaced by the small points apparently exclusively employed by tribes of the same region in later times.

To reiterate, these facts led me to assume that small points were only suitable for arrows. But my data were from a relatively restricted area and represented a rather short period of time. . . .

However, certain identification of the nature of projectile points is an important matter. Only by such identification can we hope to determine the relative age of the bow and arrow and spear-thrower or trace the former distribution of the two types of weapons, because both the propelling devices and the projectiles were perishable and can therefore only very rarely be recovered.

What further light can be shed on this question? For one thing, it would be desirable to know the weights of the largest stone points ever used on authentic American arrows. . . .

This study will present new data which seem to confirm the conclusions reached by Kidder and by Krieger, but which expand the geographic area to which Kidder's remarks apply and suggest precise lines of division for which Krieger's data were inadequate. These data will not finally solve the size-function correlation, but they do demonstrate a bimodality in the curve of distribution of projectile points sizes for a series of samples from the area of the United States which lies west of the Mississippi.

The raw data for this study were recorded on specially prepared work sheets which bear columnar headings for catalog number, length, breadth, thickness, weight, form, material, and special features. Similar work sheets are employed, of course, by most archaeologists who are working with large series of materials. A representative example has been illustrated.[5] Weights were recorded in the metric system to the nearest tenth of a gram.[6] In each series of artifacts, all of the complete chipped stone implements which are pointed at one end and which are bilaterally symmetrical were weighed; hence the total series considered includes not only projectile points, but some knives as well. Stemmed scrapers,

5 Fenenga and Riddell, 1949, Table 13.

6 The balance employed was a beam scales, manufactured by Cenco, which has a beam graduated in tenths of grams to ten grams. Brass bell weights which accompany the instrument permit the weighing of specimens up to 100 grams. Similar instruments are used regularly in chemistry laboratories for the rougher measurements.

markedly asymmetrical points, chipped stone drills, and a few other points which certainly did not or could not function as projectile points were not included.

SAMPLES

Mesa House, Nevada. This site represents the latest Anasazi occupation of the Moapa valley and is approximately equivalent in time to Pueblo III in the San Juan and Little Colorado areas. This is the only series which is taken from the published literature.[7] The sample consists of forty projectile points, all a single, stemmed form.

Buena Vista Site 3 (4Ker40) is a late prehistoric and early protohistoric Yokuts site in the San Joaquin valley. The series of points from this site available to me consists of twenty-two specimens sent to the University of California Museum of Anthropology by the United States National Museum as a sample of the total collection. The points have been described in the site report[8] and identical specimens are illustrated there, especially Pl. 38, Figs. a-n.

Hollister Site (4Sac21) is the type site for the Hollister Focus, the prehistoric ("Phase I") manifestation of the Late Horizon in the lower Sacramento valley. It has been described very briefly under the name "S.66."[9] The thirty-eight complete specimens from the site were weighed. They are now in the University of California Museum of Anthropology.

King Brown Site (4Sac29) is a site attributable to the Mosher Focus, the protohistoric ("Phase II") manifestation of the Late Horizon in the lower Sacramento valley, California. The twenty-six specimens constituting the sample are in the University of California Museum of Anthropology.

Mosher Site (4Sac56) is the type site for the Mosher Focus. It is almost certainly attributable to Plains Miwok occupation in the late 18th century, although other sites ascribed to the Mosher Focus are in territory occupied by Valley Nisenan and by River Patwin. The sample consists of forty-three specimens in the University of California Museum of Anthropology.

Nicolaus Site (4Sac86) is also attributable to the Mosher Focus. The sample of thirty-five specimens is in the University of California Museum of Anthropology.

Tommy Tucker Cave (4Las1) is a prehistoric and protohistoric Paviotso site on Honey Lake in northeastern California. A report of preliminary excavations at the site has been published.[10] The sample consists of forty-three specimens, some of which have been illustrated and described and others of which were recovered in subsequent excavations.

White Cat Village (25HN37) is a site of the Dismal River Aspect in southwestern Nebraska. A preliminary report has been published, describing the site and identifying it as a protohistoric site of the Paloma Apache, occupied in the first two decades of the 18th century.[11] The sample of fifty-one specimens was made available by Dr John L. Champe of the Laboratory of Anthropology of the University of Nebraska.

7 Hayden, 1930, pp. 64-67.

8 Wedel, 1941.

9 Lillard, Heizer, and Fenenga, 1939, pp. 57-59.

10 Fenenga and Riddell, 1949, Table 13 and fig. 58.

11 Champe, 1949.

Biesterfeldt Site is a protohistoric site on the Sheyenne River in Ransom County, North Dakota. A preliminary report has been published[12] which identifies the site as the remains of a village abandoned by the Cheyenne in the latter half of the 18th century. The sample of thirty-one specimens is in the collection of the State Historical Society of North Dakota and was made available through the courtesy of Mr James H. Howard.

Buffalo Pasture Site (39ST6) is a protohistoric site near Pierre, South Dakota, attributable to Arikara occupation in the 18th century. The sample of seventy-three specimens was obtained in excavations conducted by the Missouri Basin Project of the Smithsonian Institution in 1952.

Kee Site (4Son299) is a site on Bodega Bay in California, which has been assigned to the McClure Focus of the Coastal Aspect of the Middle Horizon. It was excavated by the writer in 1949 for the University of California Archaeological Survey and a description of the site is awaiting publication. The sample analyzed includes the sixty complete specimens recovered at the site.

Morse Site (4Sac66) is the type site for the Morse Focus of the Interior Aspect of the Middle Horizon in central California. A preliminary report has been published describing the site and illustrating a few of the specimens.[13] The sample of thirty-nine projectile points is in the University of California Museum of Anthropology.

Hicks Site (4Sac60) is a culturally stratified site, the lower component of which is ascribed to the Morse Focus. A preliminary report on the site has been published.[14] The sample of sixteen specimens comes from the lower component and is in the University of California Museum of Anthropology.

Brazil Site (4Sac43) is a culturally stratified site, the lower component of which is the type site for the Brazil Focus of the Interior Aspect of the Middle Horizon. The sample of thirty-three specimens is attributed to the Brazil Focus and the specimens are in the University of California Museum of Anthropology.

Deterding Site (4Sac99) is the type site for the Deterding Focus of the Interior Aspect of the Middle Horizon. A preliminary report on the excavation of the site has been published.[15] The sample of seventeen specimens is in the University of California Museum of Anthropology.

Need Site (4Sac151) is the type site for the Need Focus of the Interior Aspect of the Middle Horizon. The sample of thirteen specimens is in the University of California Museum of Anthropology.

The Blossom Site (4SJo68) is a site representing an as yet unnamed focus of the Early Horizon in central California. It is typologically the latest of the Early Horizon sites and shows some definite trade relations with certain Middle Horizon sites. The site has been described[16] but extensive excavations have been carried on there since the report was published. The sample measured includes forty-seven specimens found before the 1948 excavations.

12 Strong, 1940, pp. 370-376.

13 Lillard, Heizer, and Fenenga, 1939, pp. 43-46 and pl. 24a (Site "C.66").

14 Lillard, Heizer, and Fenenga, 1939, pp. 49-54 (Site "S.60").

15 Lillard, Heizer, and Fenenga, 1939, pp. 46-49 (Site "S.99").

16 Heizer, 1949.

Windmiller Site (4Sac107) is a multi-component site in the lower Sacramento valley. The earliest component at the site is ascribed to the Windmiller Focus of the Early Horizon and this material has been described in detail.[17] The sample of thirty-three specimens is attributed to this component.

Phelps Site (4SJo56) is also attributed to the Windmiller Focus. The site has been described.[18] The sixty-four specimens constituting the sample from this site are in the University of California Museum of Anthropology.

McGillivray Site (4SJo142) is a two-component site, the earlier component of which is attributable to the Windmiller Focus. The site has been described.[19] The sample of nineteen points comes from the Windmiller component at the site.

The Byrnes Mill Site is a large, intensively occupied, non-pottery site on the Big River just south of St. Louis, Missouri. Specimens from the site have specific typological resemblances to specimens from sites in the Mississippi valley representing the "Archaic Pattern." The site has not been excavated or described and the sample consists of eighty-four specimens which I collected from the surface of the site in the period 1930-1935.

The Renner Site (23PL1) is a site of Hopewellian cultural affiliation near Kansas City, Missouri. The site has been described in detail and representative points have been illustrated.[20] The sample, of sixty-two points, does not come from the excavations described but consists of specimens from this site collected by its discoverer, J. Mett Shippee, to whom I am indebted for the opportunity of weighing the specimens.

RESULTS

The results obtained in weighing this series of 884 chipped stone points are represented numerically in Figure 1. The point weights are recorded across the top of the table in units of whole grams and the whole number has been chosen as the midpoint of the class interval, so that points recorded as weighing 9 grams actually weigh between 8.5 grams and 9.49 grams. The series of samples is listed in the left hand column and the numbers in the cells represent the actual number of points in each particular sample, for each class interval.

The most obvious feature revealed by the table is that each of the samples falls into one of two classes: in one, the overwhelming majority of the points (92.3%) weigh less than 3.49 grams; in the other, virtually all of the points (99.6%) weigh more than 4.5 grams. Expressed in another way, there is a bimodal distribution for the total sample which reveals two universes which are mutually exclusive except for 33 of the 884 specimens, or 3.7 percent of the entire sample. It is necessary to recognize that two distinct fashions or traditions of chipped point technology are represented, regardless of what interpretation is

17 *Ibid.*
18 *Ibid.*
19 *Ibid.*
20 Wedel, 1943, esp. pl. 12.

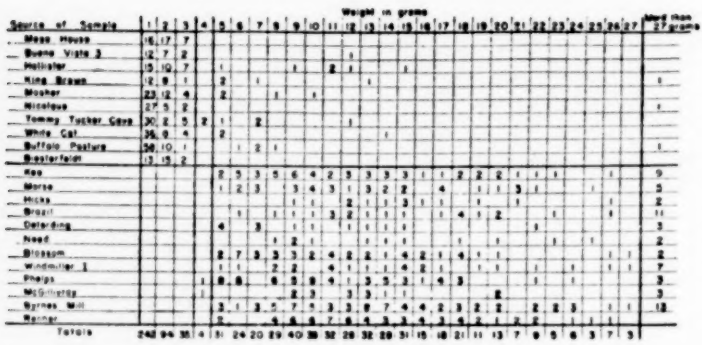

FIG. 1. Weights of chipped stone points.

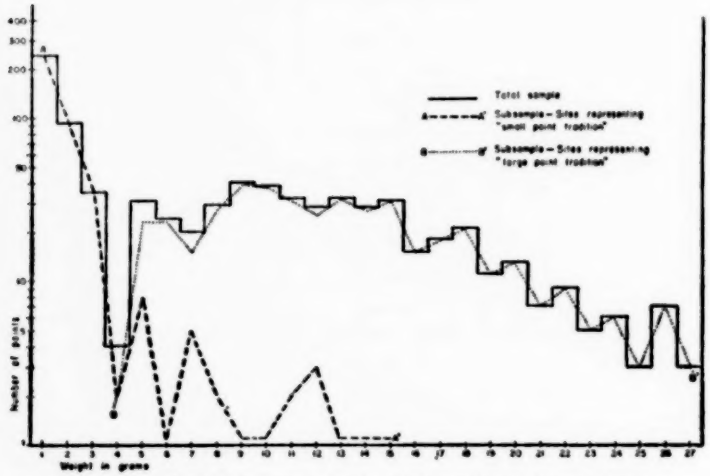
Total sample
Subsample – Sites representing "small point tradition"
Subsample – Sites representing "large point tradition"
Number of points
Weight in grams

FIG. 2. Distribution of point weights for whole sample and for each class.

made of the differences in function of the two separate classes. One of these traditions results in the production of chipped points the modal weight of which is about ten times as great as that of the other.

The second figure consists of a graphic representation of the data from Figure 1. The histogram, shown as a solid line, indicates the distribution of point

weights in the total sample, the broken line (A–A′) represents all of the points from the samples attributed to the small point tradition, and the dotted line (B–B′) indicates the points from samples attributed to the large point tradition. It has been necessary to plot the graph on semi-logarithmic paper because of the large number of specimens which fall in the first two class intervals. For this reason, the crest of the graph appears smoother than is actually the case, and differences between class intervals containing few specimens are exaggerated in appearance.

I experimented with the data for this series of points in an effort to find analogous, bimodal curves for linear measurements. Neither length, breadth, thickness nor any composite or algebraic statement of these attributes yielded similar results. It is apparent that weight is a function of length, breadth, thickness, plus form and the specific gravity of the materials used, and that weight was a desired or required constant which could be achieved by varying one or more of the other attributes.

SUPPLEMENTARY DATA

A few specific statements about the weights of chipped stone points appear in the literature. In some instances, the material is given only in the form of statements about the range of weights; in some cases, the data are presented graphically. Materials of these kinds could not be included in the table, although they constitute an important supplement to the evidence.

Kidder has given the range of weights for the most numerous types of projectile point found at Pecos.[21] These specimens are triangular in outline, side-notched, and have either straight or concave bases. Five hundred and forty-two specimens were found and of these, 541 weigh between 0.51 grams and 2.07 grams. The other point is a great deal larger, but its weight is not given. At the Lowry Ruin, a Late Pueblo II-Early Pueblo III site in southwestern Colorado, Martin found ten points, nine of which range between 0.4 and 2.3 grams in weight.[22] It is evident that the inhabitants of these two Pueblo sites made projectile points in the small point tradition.

There is a body of relevant data from a series of cave sites in south-central Oregon. Cressman and Krieger[23] have grouped their points in two major weight classes: "small" points, weighing from 0.4 to 2.0 grams, and "large" points, weighing between 2.0 and 6.2 grams. Correlations between "type" (shape) and

21 Kidder, 1932, p. 22.
22 Martin, 1936, p. 54.
23 Cressman and Krieger, 1940, pp. 44-49.

weight-class and also between stratigraphic position and weight-class showed that large points are preponderant in the lower levels, whereas small points are more numerous in the upper levels. On the face of it, these findings parallel the conclusions of this study. Cressman and Krieger, however, have drawn the dividing line at a much different place on the scale, and they have presented neither their raw data, nor any empirical evidence of bimodality in weight distribution for the whole series. Elsewhere, Cressman[24] has presented a statistically smoothed graph for the weights of points of three types from Roaring Springs Cave. Two of these types, "No. 1" and "No. 6" correspond closely in weight to the small point tradition, but "type 7" is represented as having a range of 1.4 to 4.8 grams. The mean weight for the "type 7" points is 3.09 grams and the majority of the specimens would fall into my small point tradition, but as a group they bridge the gap between the two size traditions.

Wedel has generalized the weight data for the points from two different sites near Kansas City in the following terms: "Steed-Kisker points do not exceed 3 or 4 grams in weight; at the Renner site over 90 percent exceed 14 grams."[25] Elsewhere he has said that the Renner points weigh from 14 to 18 grams.[26] The Steed-Kisker series is clearly in the small point tradition, but the statements regarding the Renner site series seem definitely in error. The specimens which I weighed from this site actually range from 4.8 to 25.6 grams in weight. Thirty-six of the 62 specimens weigh less than 14 grams and the distribution of the weights is typical of sites representing the large point tradition.

Weight data have been reported for a small but extremely important group of points found in the excavation of Gypsum Cave, Nevada.[27] Harrington has described these points in two categories, one of which he calls "arrowpoints," the other "dart points." The distribution of these weights is as follows:

Weight in grams	0	1	2	3	4	5	6	7	8	9	10	11	12	13
"arrowpoints"		2	2	1										
"dart points"						1		2	1	2				1

These two series differ from one another not only in weight but in form and in stratigraphic position as well. The "arrowpoints" all come from relatively superficial strata which are attributed to Moapa valley Pueblo and to Paiute occupation. Their actual range in weight is from 0.6 to 2.5 grams and they are

24 Cressman, 1942, pp. 81-82 and fig. 39.
25 Wedel, 1943, fn. p. 82.
26 *Idem*, p. 50.
27 Harrington, 1933, p. 105 et seq.

in the small point tradition. Two of the "dart points" certainly, and presumably all of them, come from the "sloth layer" and are attributable to the Gypsum complex. The "dart points" range from 4.5 to 13.0 grams so that they fit neatly into the large point tradition.

THE SMALL POINT TRADITION

It is necessary at this point to define the nature of the small point tradition and to indicate what evidence we have as to the function of the points which represent it.

The samples which have been indicated as representing this tradition are derived from a variety of cultural complexes and there is no obvious concordance in the points in such features as materials utilized, shape, or length-breadth proportions. The points do resemble one another in the technique of manufacture. They are characteristically made from thin flakes and are shaped by pressure flaking, as shown by minute individual flake scars. In Figure 2, the distribution of the weights of the points in this series has been plotted in units of one gram. The graph indicates that there was a modal preference for points weighing between 0.5 gram and 1.49 grams; that the total distribution is skewed to the left; and that the curve trails off to the right with an ultimate break at 3.5 grams as the upper limit of the distribution. There are a few points in these samples which exceed 3.5 grams in weight and these points conform in every way to the large point tradition.

With a high degree of probability the small points can be identified as arrowpoints. Several of the samples come from archaeological manifestations identified through historic and ethnographic sources as the protohistoric remains of cultures known to have used the bow and arrow in war and hunting, for example Arikara, Lipan Apache, Cheyenne, Yokuts, Plains Miwok, and Paviotso. Other series come from cultures in which the arrow, recognized by the "V" shaped nock for engaging the bowstring, has been found archaeologically, for example, Pueblo, superficial strata at Gypsum Cave, and Tommy Tucker Cave. Moreover, small points have been found hafted on arrows at a variety of dry cave sites in the western United States, and they have never, to my knowledge, been found hafted on any other implement. The final test would be weight data on a large series of points from a variety of sources which are known to be arrowpoints. This is hard to achieve because it can be done only by damaging hafted specimens. I have a pitifully small sample (two specimens) on which the sinew binding has become loose enough to permit the disengaging of the points. Both of these are Northern Paiute arrows, collected in the 1870s and now in the Lillard Museum

in Sacramento. Their obsidian points weigh 1.3 and 2.2 grams. I have also examined a large series of arrows in the University of California Museum of Anthropology which were collected from the Hupa, Yurok, Maidu, Washo, and Northern Paiute. All of the points of these arrows appear to fall within the range represented by the small point tradition. The same observation about the arrowpoints in ethnographic collections has previously been made by Rau although he was contrasting them specifically with knife blades:

> On the other hand, the stone tipped arrows still made by various Indian tribes are mostly provided with small slender points, generally less than an inch in length, and seldom exceeding an inch and a half, as exemplified by many specimens of modern arrows in the Smithsonian Collection. If these facts be deemed conclusive, it would follow that the real Indian arrowhead was comparatively small, and that the larger specimens classed as arrowheads, and not a few of the so-called spear points were originally set in handles and used as knives or daggers.[28]

THE LARGE POINT TRADITION

It is somewhat more difficult to define the weight range for points of the large point tradition. The dotted line (B–B′) on the graph illustrated as Figure 2 shows the distribution as derived from the data in Figure 1. A minimum weight of 4.5 grams and a modal weight of 9 grams are clear enough, but the curve tapers slowly to the right without an abrupt terminus. A larger sample might reveal a statistical significance to one or another of the depressions in the graph, which here appear to be minor fluctuations.

The identification of the function of these points is also more difficult, but several details are of significance in this connection: (1) none of the samples is derived from a cultural context in which the bow and arrow is known to be present; (2) the atlatl, as identified by the cup-shaped nock in the proximal end of the dart, is the characteristic weapon of the Gypsum complex, the projectile points of which are in the large point tradition; (3) projectile points from other cultures in which the atlatl is present (Basket Maker II, Indian Knoll and related sites) appear to be in the large point tradition although weight data are not available. The actual weight data for a series of samples of projectile points which probably functioned as atlatl dart points is extremely desirable. My own impression, based on inspection of hafted Basket Maker II specimens, is that the outside limits of such points range from about 4.5 grams to about 20.0 grams.

Some of the large points are certainly knives, and a few of the specimens can be so identified because of edge wear, resharpening, or beveling. A few of the large points may be tips for thrusting spears, although evidence for the existence of this weapon is much rarer than might be assumed. No archaeological

28 Rau, 1876, p. 2.

specimens are known and the lance is almost completely absent from the representational art of the area north of central Mexico for the prehistoric period. In any event these functions (as knives and spear points) will probably account for a small proportion of the points in the large point tradition.

HISTORICAL PERSPECTIVE

The cultures from which the samples exhibiting the small point tradition are derived occupy a relatively late position in local culture sequences and the large point tradition is characteristic of the early portions of such sequences.

The area to which this generalization applies has been broadened by an inspection of illustrations of points in the literature for culture sequences which are well established, with the view of identifying in each sequence the culture complex in which the small point tradition first appears. The results are illustrated in Figure 3. There is, of course, some doubt about the validity of recognizing the points as belonging to one or the other of the two traditions from illustrations, but lacking actual weight data, the experiment seems justifiable.

In Figure 3, each column stands by itself; there is no horizontal synchronism implied. Generally speaking, calendrical dates can be assigned only for the Anasazi column. Here the small point tradition appears in Basket Maker III times, about 600 AD. Conventional guess dates for the other columns would place the introduction of small points in these areas at somewhat later dates, but there is a great likelihood that the age estimates for the columns representing the eastern part of the area considered will be expanded materially on the basis of Carbon-14 dates for the earlier cultures represented in these columns.

CONTRADICTORY EVIDENCE

There is an important body of data which is contradictory to the observations presented above. Such data must be evaluated before final conclusions can be reached.

Experimental evidence indicates that arrows tipped with some of the smaller points in the large point tradition are functionally efficient. Browne[29] cites personal experience to this effect and I have duplicated his experiments with similar results. I have also successfully used atlatl darts tipped with points in the small point tradition—or with no points at all. The question is, how the points of the two traditions *were* used, not how they *might* have been used. Functional efficiency for both weapons depends on total balance of the projectile shafts, and considerable latitude in the weights of the points themselves is permissible.

One class of points known to have been used on arrows is heavier than the

29 Browne, 1938, pp. 358-359.

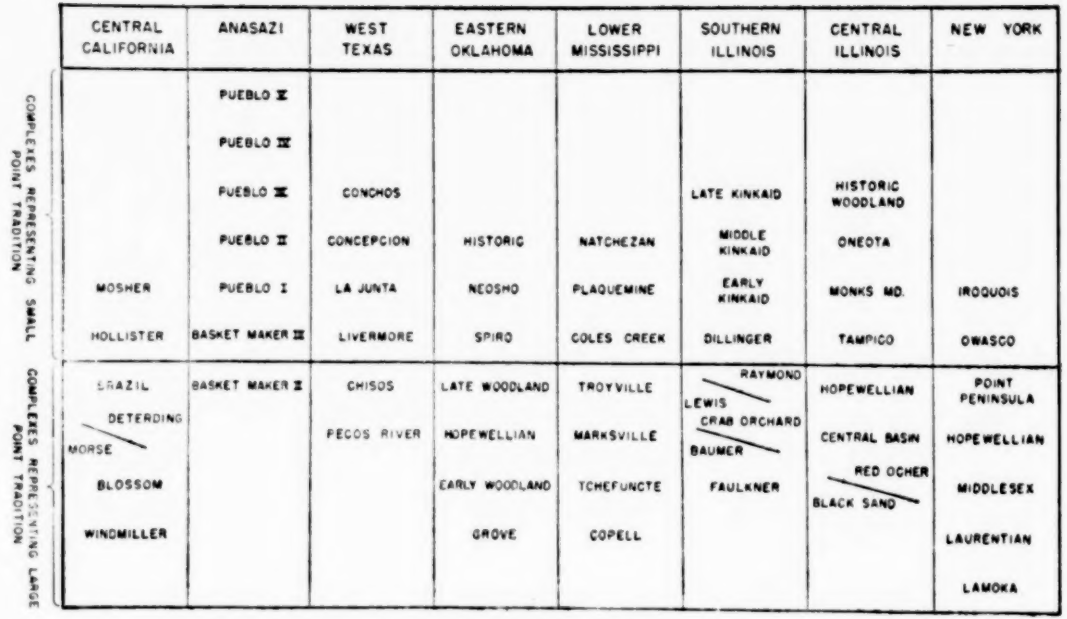

FIG. 3. First appearance of points in the "Small Point" tradition in representative culture sequences.

stone points of the small point tradition. These are the metal points, chiefly of iron, which were manufactured in commercial cultures and were traded to the Indians of the Plains at about the middle of the 19th century. The points seem heavier although I have been able to examine only a very short series, but they are very thin, hence their weight is distributed over a longer portion of the total length of the arrow. For this reason, it seems that they can be used without making the arrow head-heavy. The nature of archery conducted from horseback may help to explain the excessive weight of these points. Metal points, apparently made by the Indians from scraps of brass and iron, were recovered at the Biesterfeldt and Buffalo Pasture sites. These points have not been included in the previous tabular analysis, but seven specimens from the Biesterfeldt site range in weight from 0.7 to 2.3 grams and eleven specimens from the Buffalo Pasture site range from 0.6 to 2.8 grams. The earlier metal points therefore fit well in the small point tradition.

The Oregon Cave points which have weights intermediate between the two modes have already been cited, and other such samples may exist. One series of this kind is Strong's collection of specimens from Signal Butte I in western Nebraska. Weight data have been presented on a small series (eight points) of one projectile point type represented at Signal Butte I. The recent type description for these "McKean Lanceolate Points" indicates a weight range of 2.1 to 7.4 grams.[30] Such samples may represent efforts at compromise between the two traditions but the early chronological position of the three groups just mentioned indicates that they might be interpreted as early manifestations of the small point tradition. Still other interpretations are possible but we need the specific weight data before we can choose between the possible alternatives.

The fourth bit of contradictory evidence comes from cultural manifestations in which there is a bimodality of point weight distribution within a single sample. Some "late" Woodland manifestations, such as the Valley Focus in Nebraska, appear to yield such results. The most economical interpretation of such evidence is that these cultures employed both the bow and the atlatl.

OBSERVATIONS AND CONCLUSIONS

Without respect to the identification of the function of particular projectile points, weight is a descriptive attribute which can be determined objectively and which serves as a criterion of likeness or dissimilarity in projectile point description.

In considering the present sample, the weight criterion has served to distin-

30 Wheeler, 1952.

guish between two classes of projectile points. The points in one group are small and light in weight and can be identified with considerable assurance as tips for arrows. The points in the other group are markedly heavier and can be identified, although with somewhat less assurance, as mainly utilized as tips for atlatl darts.

In summary, the following major observations are offered:

1. Within each of the specific cultural manifestations discussed, projectile point weights cluster about one of two modes which have been designated as the small point tradition and the large point tradition.

2. The small point tradition has a modal character of about 1.1 grams and a range of 0.4 to 3.5 grams. The large point tradition has a modal character of 9.0 grams and a minimal character of 4.5 grams.

3. Cultural groups that used projectile points of the small point tradition can usually be demonstrated—through the fortuitous preservation of the specimens or through historic and ethnographic records—to have used the bow and arrow as their most important projectile weapon and to have lacked the atlatl.

4. None of the cultures exhibiting the large point tradition is known to have used the bow and arrow. On the other hand, the Gypsum complex, and several cultures which are believed to make large points exclusively (e.g. Indian Knoll and Basket Maker II) are known to have used the atlatl.

5. Cultures exhibiting the small point tradition all occupy relatively late portions of local culture sequences, and cultures exhibiting the large point tradition are all prehistoric in time and occupy generally early parts of local culture sequences.

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SOME OBSERVATIONS ON MOHAVE CLANS

LESLIE SPIER

ON THE LOWER COLORADO RIVER and adjacent on the Gila River are a group of Yuman-speaking tribes who share a system of patrilineal clans which have some unusual features when compared to other clan types of native North America. For the Mohave, the northernmost of these tribes, the clans have long been represented as non-localized, exogamous, totemic, nameless groups in which a name, differing for each clan, is used as a personal designation for all women born into a clan. Recently it has been suggested that Mohave clans may have been localized in the not-too-distant past. There are some sharp differences in these clan features in other tribes of this California-Arizona borderland. The departures of the Yuma, Cocopa, and Maricopa accounts from that of the earlier recorded Mohave suggested the need for a recheck to discover if Mohave was as atypical in this area as the original statement would have it. In particular one could question whether these clans were truly nameless; how a man's clan affiliation could be stated; whether women may not have had individual personal names; and whether there was convincing evidence of clan localization.[1]

Some twenty-two Mohave clans had been recorded prior to the date of my field investigation in 1931, but there was no certainty that this was a complete roster. For one thing, it was possible that some of the clans known among other Yumans of the area might also be represented here. Accordingly, some effort was made to secure clan names, though my interest in the nature of Mohave clans

1 The present discussion derives from a field trip of a few days to the Mohave on the Colorado River Indian Reservation in 1931-32 to fill in gaps in the published record and to check moot points. At the time it was planned to make systematic comparisons of all the Yuman-speaking tribes to check the many differences which appear between the ethnographic accounts. Other obligations interfered, so that the plan had to be abandoned and even this brief reconnaissance among the Mohave could not be extended. The scantiness of the data presented here is freely acknowledged.

Information came from two men. Dan Welsh (born 1871, father White, mother Mohave) had lived his whole life among Mohave under quasi-aboriginal conditions: his English was fairly good. Welsh also served as interpreter for an older man, Tcĭpökxu'manâ (aged 70-75), who seemed to be thoroughly informed on Mohave life.

The phonetic scheme is the simpler system described in *Phonetic Transcription of Indian Languages* (Smithsonian Miscellaneous Collections, vol. 66, no. 6, 1916) with some use of the fuller system described there. In addition R indicates a strongly trilled r-sound, even more strongly trilled than Spanish rr.

lay in another direction, as will develop below. All names given by Kroeber in his union list of lower Colorado Yuman clans[2] were also checked with my older informant.

A Mohave clan is designated ci'mul, translated as "name." And "name" it is essentially for the Mohave, for these patrilineal sibs have no other function than the indirect one of establishing exogamic limits. They are not localized communities of relatives nor ceremonial units. At best one can say they are sentiment groups, wherein the sentiment is that of belonging, of kinship, and of a place in the ordering of the universe at the beginning of time.

The translation of ci'mul as "name" is interesting since it may represent a unique Mohave emphasis. Among all other Yuman tribes having patrilineal clans this term or its cognate was recorded by the several ethnographers simply as the term for clan (e.g., Maricopa, Yuma, Cocopa, both Diegueño groups, Akwa'ala, Kiliwa).[3] Unfortunately we cannot be sure that this is a Mohave peculiarity, for the general word (or words) for "name" in these tribes seems not to have been recorded.[4] What is referred to here by the Mohave is not so much a name for all the members of a clan as a collectivity—though a clan name is so used—as a designation for the women born into a clan.

Lists of clan names as obtained from my two informants follow.[5] With these are given the totems ascribed to each clan. My interpreter invariably translated "the clan name means such and such," the totem. But it is clear that these are "meanings" only by connotation, the clan names being in general meaningless words. Yet there is a definite resemblance between some of the clan names and the common words for their totems[6] (palpable in nos. 10, 12, 20, and 21 of List A, suggestive in nos. 1 [cf. "fire"], 8, and 16). There may be alternative common names for the totem animals and plants, as yet unrecorded, which might resemble the clan names. (The type of alternative designation is to be seen in the Maricopa word for prickly pear cactus, kălyă'p, literally "flat[-leaved]." It does not seem possible to decide in these cases whether the totem gave its name

2 Kroeber, *Handbook*, p. 742.

3 Spier, *Yuman Tribes*, p. 189; Forde, *Yuma*, p. 142; Gifford, *Cocopa*, p. 287; *Clans and Moieties*, p. 167; Spier, *Southern Diegueño Customs*, p. 299; Gifford and Lowie, *Akwa'ala*, p. 340; Meigs, *Kiliwa*, p. 17.

4 Or is so buried in the ethnographic and linguistic reports that I have been unable to locate it. I must confess to being as culpable as anyone in failing to secure the word among other Yuman groups.

5 Welsh's list (B) was recorded first; the longer list (A) from the elderly man was obtained several days later, Welsh interpreting.

6 My transcriptions of Mohave words for totems are given in parentheses. Others, set in brackets, are from Kroeber, *Phonetic Elements*, or, where this resource failed, are the presumed cognates in Maricopa (marked *M*) from Spier, *Comparative Vocabularies*.

to the clan, or whether by a species of folk-etymology a like-named totem was assigned to the clan.

List A: Tcĭpŏkxu'maʁà	*List B: Welsh*
1. kwĭnʏω'ʁà: deer [aqwā'qa], eagle [aspā'], black bug (xuma'na'n), fire [*M* âau']	1. nʏωlc
2. lʏăω'tc: cloud [*M* âkwĭ']	2. ωtc: clouds, buzzard
3. kutcwa'tc: moon [haly'a']	7. huwa'lya
4. xalpo't: frog [aha'nya]	
5. hultca'tc: corn, wheat, watermelon [*M* kwiθu'i], all crops (i.e. food [tšamatš])	3. tcatc: corn
6. gat: tobacco [*M* uvâ]	11. ḳŏt
7. elʏâmu'c: screw bean [*M* 'ic']	4. mus: screw bean
8. melyika'nʏaha'ʁà: packrat (amă'lk)	6. mĭ'lyika: packrat
9. kwĭnyi'θ^h: a branching cactus (not cholla) (âtŏ't kŭ'mθe), prickly pear (? âtŏ'tâ a'ẋpa)	8. kwĭlyi'θa
10. ikumâθĭ': ocatillo (kumâθĭ')	
11. gucu'lʏ^k: beaver [*M* pĕm]	10. cul
12. vaxa'θà: a grass with edible seeds (xa'θxaθ)	12. vaha'θ^h
13. âvĭ'mŏk, "behind the mountain [avĭ']": mesquite bean (aiya'; a'nalya, mesquite tree)	14. vĭ'mŏk
14. kutki'lyà: horned owl (ku'pit [θokupi'ta])	
15. nyi'kxa: hogweed (? vima'nk)	
16. machipa': quail [ahma]	
17. xipa': coyote (xŭkθa'ʁà [hukθara]: in tales named θaʁâvi'yo)	5. hipa': coyote
18. mâθe^r'xa: screech owl (tako'k)	13. muθe'r
19. maḳ: a yellow and black bird (cĭkuma')	
20. mu'ha: mountain sheep (amo'-[a'mmo])	9. mu'ha
21. mat'a'tca: wind (ma't'ha [ma'thăk, wind, north])	
22. tii'lya: prickly pear cactus [*M* kălyă'p]	

As of 1931 mat'a'tca (no. 21) and vaxa'θà (12) were said to be extinct clans (though in the latter case it may have been meant that the grass—the totem—had disappeared). Only one man was left of machipa' (16), and very few members of mâθe^r'xa (18) and âvi'mŏk (13).

Caterpillar or worm was denied as a totem of nyi'kxa (15) as reported by Kroeber. Bourke's listing[7] of the totem coyote for his ma-si-pa was also denied.

7 Bourke, *Notes on the Cosmogony*, pp. 180-181.

It seems probable that Bourke or his informant confused this word with his hi-pa, coyote.

While Welsh named only fourteen clans (List B), as against half as many again named by the older informant (List A), he volunteered that there were probably others. There may have been more clans in the historic period than either man named during the rather brief interviews. Yet that List A of twenty-two agrees with the same number recorded many years before by Kroeber[8] is a warrant of its completeness. There is only one disagreement between the two lists of twenty-two, which may be no discrepancy at all. In List A is mak: a yellow and black bird, which is not on Kroeber's roster; conversely Kroeber has maha: a small bird, possibly dove. But in view of the phonetic resemblance of the words and the small bird totems, it is possible that reference is to the same clan. Indeed Kroeber equates Mohave maha with Yuma-Kamia-Kohuana-Cocopa sikuma, which is the same as the common Mohave word for the yellow and black bird of List A. Another identity may be established here: Kroeber recorded kŭsŭlye as a name for women of one clan but without recording a name for the clan or its totem.[9] This seems to be no. 11, gucu'l,[4]: beaver of List A.

Since some significance attaches to the order in which informants listed the clans, they are numbered here in that sequence. So far as I know Welsh named them (List B) as his memory happened to serve. On the other hand, my elderly informant recited those of List A in the sequence of mention in the creation tale, which he had to tell in skeleton form to guide his memory. I did not take down the tale, even in this outline form, but recognized it at the time as a counterpart of the Yuma origin tale published years before by Harrington.[10] The recital was the familiar tale of emergence, the dying god, and the culture-founding activities of his successor, Mastamho. According to this informant, the first four clans here listed were "the first four in the house made by Mastamho." The Mohave origin tale is available only in an outline form which does not include this detail, but a close parallel appears in the Yuma version wherein clan names are assigned to those "in the house."[11] Whether all the other clans figure in the Mohave tale—and in this sequence—I do not know. As this informant's story unfolded it became quite evident that he was using as an *aide-mémoire* those landmarks or localities mentioned in the clan wanderings described in the tale. At the time I saw no point in recording these clan-locality associations, since I then believed—

8 Kroeber, *Handbook*, p. 742; also Kroeber, *Mohave Historical Epic*, p. 116.

9 *Mohave Historical Epic*, p. 172, fns. 76, 79.

10 Harrington, *Yuma Account of Origins*.

11 Kroeber, *Two Myths*, pp. 314-316; *Handbook*, pp. 770-771; Harrington, *op. cit.*, pp. 344-345.

and still do—that the clans are not localized. It is also interesting that this informant did not name his own clan (no. 7) first.[12]

THE PROBLEM OF CLAN LOCALIZATION

In a recent publication Kroeber has listed the clans in the order in which they "took lands" along the Colorado bottoms according to a largely mythological narrative.[13] Only ten of the twenty-two clans are involved in this, and in each instance it is the leader of a band or lineage within a clan who is cited as settling in a particular locality. For most of the ten, more than one leader and more than one locality is specified, the localities often in quite different parts of Mohave territory, and the references to leaders of any one clan interdigited in the narrative among the others. Kroeber's seriation of these ten clans is, however, about the best fit for order of mention in the tale. Whether the remaining twelve are listed by Kroeber in any significant order is not apparent. He has also mapped the localities thus occupied by these ten land-holding clans of mythical times (see below). The clans are then seen to be in no regular geographic sequence in the valley, the order of mention taking one back and forth along it. The only other significant fact is that the clan first on the list (nyo'iltše, identified as our kwĭnyώʀà by its name for young women, $n_yiω'ltc$) occupied for the most part a considerable stretch in the middle of Mohave holdings along the river. In the tale this clan is credited with numerous bands, each with a separate totem.

Bourke has also given a list of fourteen clans.[14] He gives no evidence for their seriation, and a comparison with Kroeber's and our lists would make his list appear wholly random.

It is interesting to compare the order in Lists A and B with Kroeber's, remembering that the only certainty of significant ordering attaches to the first ten clans named in Kroeber's list. The first six enumerated in List A correspond to as many clan names in the first ten of Kroeber's list; the first five of List B likewise. Clan 1 occupies first position in all three lists, and clan 2 second position—as it does by some chance in Bourke's list also. In other words there is a marked tendency for these informants to name much the same clans at the outset of their enumerations, whatever their guides to memory may have been. And in particular, there must be some good reason why clans 1 and 2 (kwĭnyώʀà or $n_yωlc$ and $l_yăω'tc$) are named first. It would be interesting to know whether these have been the clans of largest membership in the historic period, or whether they are invariably mentioned first in Mohave mythology.

12 I do not know whether this was true of Welsh (List B). His father was White, mother Mohave: what clan affiliation he was given is unknown to me.

13 Kroeber, *Mohave Historical Epic*, pp. 114-116.

14 Bourke, *loc. cit.*

A second point of interest would be whether there is a geographic sequence to the enumeration in our two lists. The following presents Kroeber's schematic charting of the Colorado valley, giving the positions of clans according to the "land-taking" narrative, the numerals indicating the sequence of mention in the narrative. In parallel to this are given the clans of Lists A and B, their numerical sequence retained, and each assigned to the locality of the correspondingly named clan in Kroeber's list.

"Land-taking" Narrative

	2	5	3	2	2	4	6	7	1	1	1	1	8	1	1	9	2	3	1	
North																				South
				2	2	4				1	4							3	10	

List A

2	6	4	2	2	17	7	15	1	1	1	1	13	1	1	5	2	4	1	
			2	2	17				1	17							4	22	

List B

2	11		2	2	5	4		1	1	1	1	14	1	1	3	2		1	
			2	2	5				1	5									

It is evident that the sequence of each of our lists is geographically random, like that of the "land-taking" narrative. That the geographic positions of our clans 1 and 2 are identical with Kroeber's is merely a consequence of their being named first in all three listings. Some significance may attach to clan 1 of all three lists being assigned territory at the middle of the Mohave range, but this has no bearing on the relative geographic sequence of the other clans.

The foregoing raises the question of the localization of Mohave clans. Until recently these clans had been described as non-localized; that is that members of a clan did not occupy a single compact area nor predominate in one; rather, that the clan households were to be found randomly interspersed and duplicated in many Mohave settlements. Kroeber's original statement (1902) read:

> It is also said that those of one name [clan name or the name applied to the women of the clan—it would make no difference here] *formerly* lived in one area, and were all considered related.[15]

In a revised statement (1925) we read:

> At a certain point in some long myth dealing with other things a man called

15 Kroeber, *Preliminary Sketch*, p. 278; italics supplied.

so and so announces or is instructed that he will take such and such a name for his daughters and his sons' female descendants. Sometimes it is added that he will settle or "take land" at a specified place. Such references can scarcely be interpreted as any strong indication of an original local basis for the clans. They seem rather to reflect the custom of the river Yumans of living in little groups of kinsmen, and therefore incidentally of clan mates, at more or less shifting sites determined by the farming fields, and scattered rather randomly through the cultivable portions of the tribal territory. At the same time it is well to remember that the "clans" of the Diegueño and southern California Shoshoneans were essentially local in native consciousness and perhaps in fact.[16]

All this seems a clear-cut statement of non-localization in historic times, whatever may have been true for some remote time or ascribed to it.

The most recent discussion might be read as concluding that the Mohave were segmented into definitely localized clans—each forming a separate community—in the immediate past, or if not then, at some distant time in the Mohave past. Thus in his discussion of the historicity of the *Mohave Historical Epic* cited above,[17] Kroeber several times uses the term "clan localization" in such fashion as to lead an unwary reader to believe that he was referring to a situation in which all members of a clan occupied one compact area. The statements may be a bit equivocal, but a more careful reading shows that he had in mind only the localities ascribed to clan segments ("totemic lineages or bands" are his words) and presumed that this species of localization pertained to the period of the first half of the 19th century. His summary statement is probably too loosely worded: ". . . the tale probably also reflects the essential localization of totemic clans in Mohave Valley around 1800-1850." But this section of the narrative does not mention lineages or bands at all (save at one point), the formulaic expression here being, e.g., "Then Kwinyôra, which means deer [the totem] and who called his daughters Nyô'iltše, took [the localities] Hotûrveve and Apenysupanye." There are some thirty entries of this sort with no more specific reference to lineage or band than in the specimen just quoted. While we may agree that in all probability a lineage within a clan or a band is implied in each case, a narrower and more literal meaning would be that a leader—and his immediate followers, we may presume—settled in a particular locality. This is not clan localization; at best it implies only that specific lineages occupied such and such localities.

That there was even this much localization of segments of clans in the 1800-1850 period is an assumption. Kroeber remarks:

16 Kroeber, *Handbook*, p. 742.

17 *Op. cit.*, pp. 114, 116; see also pp. 103-104, 170.

> But whether the list [of ten land-taking clans] reflects wholly the landholdings of the half-century preceding 1850, or also in part the holdings of a century or two before 1800, there seems to be no way of telling; nor how much shifting there was with the lapse of time. [And again:] I have no list of actual clan localizations during the nineteenth century to compare with the list developed in the tale, but assume that the latter reflects a fairly modern condition rather than remembrance of an earlier one.[18]

Given patrilocal residence, there should have been some slight concentration of clan members in a locality, as remarked by Kroeber in his 1925 statement quoted above. But this is not lineage localization any more than clan localization.

There are some alternative explanations for the seeming evidence for localization. For one, it is possible that the Mohave, like the Diegueño and their southern neighbors, have derived from the southern California Shoshoneans a feeling that there should be some association between clans and particular localities. A quite different explanation would be that like most Mohave tales—and indeed most Yuman tales—the strong literary tendency to localize every step of the story and the whereabouts of the actors has led to the "land-taking" described in this *Mohave Epic*.

For the first alternative, the general distribution of patrilineal clans among the Yuman-speaking peoples is suggestive. Patrilineal clans have been recorded for Kiliwa, Akwa'ala (Paipai), and adjacent groups in northern Baja California, the Diegueño groups and Kamia in southernmost California, among Cocopa, Kohuana, Halyikwamai, Yuma, Halchidhoma, and Mohave successively northward on the lower Colorado, and eastward on the Gila among Kaveltcadom and Maricopa.[19] This is part of a wider extension of patrilineal clans, including the various Shoshonean groups of southern California, Pima and Papago on the Gila and southward, and tribes of northwest Mexico. Save for the Californian tribes, in all cases the clans are definitely recorded as non-localized: clan members are interspersed in the local communities.

The seeming exceptions to this non-localization are suggestive in their distribution; namely Northern and Southern Diegueño (including communities of both dialect groups in northern Baja California), Kiliwa, and possibly some of their neighbors. The locale of these exceptional peoples is immediately south of the southern California Shoshoneans, who have patrilineal clans—or lineages, as

18 *Idem*, pp. 114, 170.

19 Clans are definitely known not to occur among the Yuman tribes of upland western Arizona—Walapai, Havasupai, Western and Northeastern Yavapai. The matrilineal clans of Southeastern Yavapai are demonstrably imitations of those of the Western Apache, and apparently of relatively late introduction.

Gifford would have it—each living as an independent community and each something like a cult unit identified with a particular local area.[20] Inasmuch as removal of these Alta and Baja California Yumans to the missions during the Spanish regime and subsequent drift back to their former homes may have led to a mixed resettling, as well as to lapses of memory of wholly aboriginal conditions, the matter of their localization is somewhat uncertain.

The Kiliwa material is difficult to assess. Meigs' statement reads:

> Sibs or lineages [the words seem to be used interchangeably in this report] are definitely associated, in the minds of the people, with specific geographic localities, the name of the locality commonly appearing in the title. The smallest unit is the masélkwa, virtually synonymous with "ranchería." The coming of Europeans caused a dispersal of the Kiliwa and few of them now live at the original locality of their masélkwa, but they have a nostalgic feeling for their ancestral areas. Some masélkwa are grouped together into a more general lineage, ichíupu. Masélkwa and ichíupu correspond to the Paipai sumúl.[21]

The Paipai (Akwa'ala) word sumúl is the general Yuman term for clan. Does the last sentence mean that both masélkwa and ichíupu are to be reckoned as clans? In the list of "lineages" masélkwa is interpreted as "local name," ichíupu as "general name." Further, ten of the twelve masélkwa names tabulated end in -pak(a)wa, "people of," so that the local name must be read as "people of such and such a place." Since the element pa is generic Yuman for "people, person," I interpret the suffix -k(a)wa as a locative; hence masélkwa itself may be a locative designation for any small fixed community. While Meigs wrote that the name of the locality commonly appears in the titles of "sibs or lineages," an inspection of his list shows that this is true of the masélkwa but the locative suffix appears in only one Kiliwa and one Paipai ichíupu name among thirteen. On the contrary the ichíupu ("general") names look suspiciously like clan names, though I cannot identify the Kiliwa forms with Diegueño or Kamia clan names. The name jat'am (= xat'am), given as both the ichíupu name and tribal name of a people located south of the Mexican border, agrees with xŏtŭ'm, doubtfully a Southern Diegueño clan[22] located in the region assigned to these people by Meigs.

Meigs' list of Paipai clans overlaps in part with the longer list furnished by Gifford and Lowie. These ethnographers describe the groups as "paternal, nontotemic lineages like those of the Diegueño," and "Akwa'ala lineages are said not

20 There are some variations on this Shoshonean theme but they are not significant for the present argument.

21 Meigs, *Kiliwa*, pp. 16-19.

22 Spier, *Southern Diegueño Customs*, pp. 304-305.

to have been localized, but to have been interspersed."[23] Three of sixteen names on the Akwa'ala list can be identified with Diegueño clans with some certainty; three others smack of Yuman clan names; five must be local groups, having the familiar ending "people of —" of the Kiliwa "local names" (of which one is on Meigs' list as Kiliwa); and one (qali'wə) looks suspiciously like the tribal (or dialect) name Kiliwa. What we are concerned with here is that these "lineages" seem to be identical in character with clans among the Diegueño—which is borne out by the Akwa'ala term for the unit, summu'lla—and were not localized (a queer circumstance for "lineages" in this part of the world).

Meigs has further mapped, immediately south of the border, a series of Diegueño-speaking groups whose names are identical with those of Southern Diegueño clans. Since Meigs' proclivity was to assume localization, we cannot be sure whether he recorded here truly localized clans or the supposed territories of non-localized clans.

The upshot of this long excursus is that we have reason to doubt that the clans of Kiliwa, Paipai, and their neighbors were actually localized. There may, however, have been localities predominantly occupied by segments of clans, perhaps lineages. The data are fragmentary and conflicting. All we can be sure of is that there was some sort of association between clan and locality.

The data on the California Diegueño are better, but also contain uncertainties. Gifford's information from the Diegueño led him to believe that "each clan was probably localized, or *at least regarded as localized* by the natives" (italics provided). The more explicit Southern Diegueño material provides the statements that each clan "came originally from," "formerly lived near," or "lived at" such and such a locality, but that within present memory they have lived interspersed, without localization. The data for localization in the Northern group are few and indefinite, as Gifford notes, and it may be his inference is correct that this is a consequence of removal to the missions in Spanish days and of resettlement on reservations.[24] Southern Diegueño information obtained some

23 Gifford and Lowie, *Akwa'ala*, p. 340. Seventeen names are recorded, but two are presumably identical, as these authors indicate.

24 Gifford, *Clans and Moieties*, pp. 167-174. In this publication the units are designated clans, but some years later Gifford preferred to call them lineages (*Miwok Lineages*, p. 393). The reason seems to have been that, starting with the well-recognized lineage systems of Miwok and Yokuts, he now saw lineages as the basic social unit throughout all California—not only the formal unilinear units of southern California, recognized as such by the natives, but also the potentially lineal, non-conscious family groupings throughout the north. I do not believe his reformulation has been generally accepted.

So far as the Diegueño go, no new data were available to Gifford except those given in Spier *Southern Diegueño Customs*, which certainly do not indicate the units were lineages. Smaller

years after Gifford's, and intended in part as a check, indicated that each clan was *associated* with a restricted locality which *may* have been its locale during part of its summer wanderings. A mapping showed overlapping of the areas ascribed to the individual clans and also with settlements of Kamia in the Imperial Valley. Aside from some possible segregation into clan groups in the summer, the remainder of the year is known to have been passed in mixed communities. At the time of publication of these Southern Diegueño data I was inclined to take them at face value—namely, that there had been some clan localization—though aware that a native theory of clan relation to the land might have led to too-definitive, rationalizing statements on the part of informants.[25] For some time I have thought a restatement was in order: I am now convinced that neither Southern nor Northern Diegueño clans were local entities but that a partially assimilated system of ascription of territory to clan had been derived from the Shoshoneans immediately to the north. It has long been recognized that a drift of culture traits took place from these Shoshoneans southward to the Diegueño. This is exemplified in items of the boys' initiation rites, the eagle-killing and whirling-dance ceremonies, the songs pertaining to these and other rites; and in particular, Shoshonean influence would explain the tendency for a clan chief to serve as ceremonial leader among Diegueño in contrast to the River Yuman dance organizer of indifferent clan affiliation (e.g., the Mohave kohota). The general trend of change among Diegueño seems to have been in the direction of making each clan—or what is more significant, each local group—a ceremonial unit like those of the Shoshoneans to the north. What we are suggesting here is that, as part of such a trend, the Diegueño had come to *ascribe* locality to clan when in reality it was a bare circumstance.

To return to our suggestion with respect to the Mohave, I am proposing as

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Diegueño clans may very well have comprised only a single lineage—but we do not know that. The distinction between clan and lineage should be preserved: in our anthropological writings we usually define a clan as a unilinear group whose members suppose themselves related though they cannot prove it, and a lineage as a unilinear group in which affiliation of all members can be demonstrated. Even a very small clan may comprise a number of distinct lineages. (I invite attention to Kroeber's excellent analysis of the Zuñi situation in 1915-16.) Further, a small group of kinsmen living together, linked unilinearly, is not to be taken as a lineage; for there may be other such communities related to the first by unilinear bond, the several collectively forming a lineage. In short, small size must not be taken as specifying a lineage. Both the dispersed character of the larger Southern Diegueño clans (as recorded by Spier) and native uncertainty as to relationship within the group emphatically argue against considering these clans the equivalent of lineages. To suppose then, as Gifford does (*loc. cit.*), that these Diegueño "lineages" are identical with those of the Shoshoneans and hence localized units is unjustified.

25 Spier, *Southern Diegueño Customs*, pp. 299-308; note espc. fn. 15. See also Gifford, *Kamia*, pp. 11-12.

one possibility that the Mohave have been affected similarly by their Shoshonean neighbors to the west. The Mohave are well known to have had contact and knowledge of these people.[26] The *Mohave Epic* may be expressing no more than a native theory—that clans ought to be connected with localities by some perhaps mystic association and were indeed so located in mythical times.

The second alternative to accepting actual localization of Mohave clans is, as noted above, the possibility that we have here in the *Epic*, at the point where "land-taking" is described, no more than the localization of incidents which is characteristic of the narrative throughout. Kroeber has remarked on this trait of Mohave pseudo-historical narratives, and it extends to other tales as well: "The geography, as always among the Mohave, is gone into very minutely," and the tales, as a consequence of this and other attention to minutia "are staggeringly prolix."[27] This is a stylistic feature which—to follow the same observer of their life—reveals the Mohave delight in self-identification with every corner of their land, the warmth derived from mulling over details of action, the mouthing of the very names of tale-personages and places. This literary feature is by no means confined to this people but is almost as much a commonplace in the mythologies of the Yumans as a whole. The upshot is that the mention of places of settlement in this narrative—which, it must be remembered, provides our sole evidence—may not have been intended to specify clan localization at all.

THE USE OF CLAN NAMES

Kroeber's pioneer description of Mohave clan characteristics in 1902 has been gratefully used as a guide by all later investigators among other Yumans. The Mohave system was seen as anomalous among the varieties of North American clans as they were then known. The essence of their peculiarities are given in Kroeber's restatement in 1925 as follows:

> The Mohave share with the other Yuman tribes of the Colorado a peculiar clan system. This comprises patrilinear, exogamous, nameless groups of totemic reference. All the women born in a clan bear an identical name, although they may in addition be known by nicknames or other epithets. These clan names are of totemic import, though they are not the word which is in common use to denote the totem object. Thus *anya* is "sun," but the woman's clan name that "means" sun, as the Mohave say, is Nyo'ilcha.[28]

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26 On Mohave as wide travellers—a distinctly non-California trait—see Kroeber, *Handbook*, p. 727, and elsewhere.

27 Kroeber, *Handbook*, p. 771; see also the observations on the recitation of geographic itineraries in Kroeber, *Mohave Historical Epic*, pp. 130, 132, *passim*.

28 Kroeber, *Preliminary Sketch*, p. 278; *Handbook*, p. 741.

So far as the use of the clan name as a designation for all women born into a clan goes, my present field data bear out Kroeber's observations; as indeed do the ethnographic accounts for all the Yumans of the Colorado and Gila who have this type of clan.[29]

But several questions arise. Are the Mohave clans actually nameless, as Kroeber wrote? Just how would reference be made to the body of individuals who form a clan? How would a man refer to his own or another male's clan affiliation? In other words, is a clan name—which, as Kroeber has it, is solely the designation for women of the clan—used as the name of a clan—a group of both sexes—or is it otherwise? Inasmuch as experience with Maricopa, Halchidhoma, Yuma, and presumably Cocopa[30] (from whom we have adequate descriptions which were based on Kroeber's Mohave account as a point of departure) shows that the women's name can be used for the group and for men, and is so used, I made some inquiries to discover whether there is a significant Mohave difference here.

It will be profitable first to see what is the situation among these other Yuman tribes.

> Although sib [clan] membership is inherited in the male line [among the Yuma] the sib name is taken as a personal name only by women. The sibs are not nameless, however, as Kroeber has suggested. Sib names are, indeed, used only in referring to women, but the sib group is referred to by a collective term composed of the prefix pa (from pīpa, people) and the sib name, e.g., pa'xavtca'ts. The sib title is sometimes phonetically modified in this usage, e.g., ma've (snake people are known as pamavī'ts). This usage became apparent in discussing origins and ceremonials with Joe Homer [an informant]. The term was not generally used to refer to modern sib groups, but it appeared that this was due to the almost complete decay of sib function. . . .
>
> Women in addition to the sib name also frequently use another name derived from some characteristic feature or activity of the namesake, as mave'tēkv (tēkv—creeping closer all the time) [that is, names of totemic reference]. These names are adopted in childhood without ceremony. . . .
>
> Men's names have no relation to sib affiliation.[31]

In the Maricopa community there were phonetic equivalents of the Mohave women's names which served explicitly as names of the sibs. This is unlike the Mohave

29 On the other hand, women's clan names do not occur among the California Yumans (Diegueño, Kamia, Akwa'ala, Kiliwa), and in all these tribes the clan name is unquestionably the designation for the clan as a whole.

30 Maricopa-Halchidhoma informants implied that the names were also clan-group names among Kohuana and Halyikwamai—erstwhile residents on the lower Colorado—though it is possible that they were extending the views of their own people to these tribes. Gifford's brief statements on Cocopa indicate the usual series of women's names but contain no explicit statement about designations for clans as wholes (*Clans and Moieties*, pp. 156-162; *Cocopa*, p. 287).

31 Forde, *Yuma*, pp. 143-154.

situation. The sib name was regarded as only potentially the name of all the women of the sib; many of them were called by the name of the sib, but only after marriage. The sib names might thus replace their personal names but this was by no means automatic and universal. They were rather used as convenient alternatives for the personal names. The feature of the Maricopa-Halchidhoma naming practice which contrasts most strongly with the Mohave as Kroeber describes it, is that most of the women had individual personal names, many of which had totemic import. Usually the names referred indirectly to the totems, but they were sometimes the everyday names of the totems. Some men, in addition, had names of the same sort. . . .

The sib name thus serves as an auxilliary designation for all the women of a sib. Some women have no other personal name. . . .

Boys' names were chosen indiscriminately, but girls were commonly named with reference to their sibs. . . .

Such names of girls persisted through life. Sometimes they came to be known only by the names of their sibs, since it was the custom for the husband's relatives to call the wife in this fashion. Men, however, usually acquired a new name at marriage, the childhood name either being dropped or falling into secondary use. The man's new name was a nickname, said to be applied to him by his mother-in-law, but perhaps more commonly given him by his friends who then declared his wife's mother had so styled him.[32]

On the whole my Mohave information bears out Kroeber's phrasing of the situation. Informant Welsh stated: "A person gets his ci'mul [clan affiliation] from his father. Men have these clan names as really their names, but people never call them by this [i.e. address or designate them individually]. But daughters are called by this name. Women had [basically] only one name, that of the clan. If a man had more than one daughter, he calls one by the clan name, as mus [which has the totem screw bean]. The others he calls by such names as tapo'ʀtk, "dump it," or by another name which describes the screw beans or how the tree looks. Names of men do not refer to the clans." But in the course of discussion with Welsh and my older informant there was no hesitation on their part in referring to the whole clan by the clan name, and it was clear that the clan affiliation of a man could be designated by the clan name even though the word did not serve as his personal name. It must be borne in mind that the words serving as women's clan names are not always identical with the names of the clans.

The variations on this theme among Mohave, Yuma, and Maricopa thus run as follows. The Mohave clan name functions primarily as a personal designation for all women of a clan and hardly as a group appellation; individual designa-

32 Spier, *Yuman Tribes*, pp. 187-188, 196-197.

tions for girls and women are nicknames[33] or, less commonly, references to the totems. The Yuma equivalents are definitely used as names of clans and, like Mohave, are applied to women throughout their lives; additional personal names for women, having totemic reference, appear here to be more common. Maricopa clan names are unquestionably names for the patrilinear groups; their use as personal designations for women becomes fixed, on the whole, only after marriage, and throughout life there is more use of individual names for women, many having totemic reference, and, further, some use of totemic names for men.

In certain Mohave clans there is a change of a woman's name in later life. My older informant said that this is true of three, and only three, clans. In kwĭnyω'ʀă clan, when a girl is young she is called $n_yiω'$ltc; after she has lost a child they call her $n_yω$tc. In xalpo't clan, the corresponding forms are pot and xalpo't; in gucu'l_y^h clan, they are cu'l_y^h and gucu'l_y^h. Welsh had previously given the same information for the first of these clans: $n_yω$lc becomes $n_yω$c (in his pronunciation). This confirms Kroeber's information, though he cites the practise for only the first and third: nyo'ilcha becomes nyocha and siulya changes to kusuvilya on the loss of a child.[34] The analogous practise among Yuma and Cocopa is to prefix "old woman" to the clan name in later life. Among the Yuma "in old age, i.e., when the hair is turning grey, the sib name is prefixed with akoi–old woman. Sometimes the sib name is contracted, or the namesake [totem] used instead." And for both Yuma and Cocopa: "The word for old woman (akoi in Yuma, wakui in Cocopa) is preposed to the ordinary totemic name [read: clan name] for the woman, to the name of the totem, or to yet another name which is neither that of the woman nor of the totem . . . when gray hair began to appear."[35] There seem to be some differences in this practise among Yuma and Cocopa, to judge by Gifford's lists. In fifteen Yuma clans, half simply prefix "old woman" to the clan name; the remainder are about evenly divided substitutes of totem names and names of another character. We cannot be sure that the latter are not obscure totemic references. In seventeen Cocopa clans only one is "old woman" plus the clan name; the remainder are totem name substitutes except for three, and again, we cannot be sure that these are exceptions.

Here again are variations on a theme among the Colorado-Gila Yumans—the change of a woman's name in later life. In a minority of Mohave clans the

33 See, in addition to the quotation from Kroeber above, Bourke, *Notes on the Cosmogony*, p. 181: "Children belong to the father's family. . . . The daughters all answer to the family [clan] name just as you would say Jones, Smith, etc., but they have their own names at home, such as Big Girl, Little Sister, etc."

34 Kroeber, *Handbook*, p. 744; *Mohave Historical Epic*, p. 116.

35 Forde, *Yuma*, p. 145; Gifford, *Clans and Moieties*, p. 163; *Cocopa*, p. 287.

change is made when a woman has lost a child by death, the changed forms being simply variants of the usual clan name. Among Yuma and Cocopa the analogous change is made in late middle-age when "old woman" is prefixed and, as a rule, the name of the totem substituted for the clan name—but there are differences between these two. What seems to be the Maricopa analogue is the tendency to replace at marriage women's personal names of totemic reference by clan names. It should be remembered that in all likelihood Mohave, and Maricopa also, often prefix "old woman" to the clan name or personal name—although we have no explicit statement to this effect—since this kind of semi-mocking designation as "old woman" is common enough among all Yuman-speaking peoples with whom I am acquainted.

Men's names do not refer to the clans among Mohave. Our few data corroborate Kroeber's brief statement that their men "readily accept and even take for themselves names of the most undignified sort. A phrase that strikes as apt or novel or alludes to a trivial incident is the basis of many names. There is not the least shrinking from obscenity, even in such personal connection as this."[36] Our information is that a man's boyhood name was discarded and a new name acquired when he was twenty to twenty-five years old, but not necessarily at marriage. Nevertheless, this parallels the Maricopa situation where a new name—a nickname—was usually given at the time of marriage.[37]

Welsh's boyhood name was pakàtaí, "old man," which was ordinarily abbreviated to kàtaí, "old." His adult name, which he received when twenty years old, is kuhuwa´nkuraú, "step fast." My older informant is named tcïpŏkxu´marà, "unripe flower," from tcïpŏk, "seed pod, flower," and xumarà, "immature plant or child" (but not animal).

ADDENDUM ON SONG CYCLES

The long series of Mohave songs (song cycles) which are interdigited in their tales or which, in parallel, purport to tell the themes of the tales, are also present in related form among other tribes of this general area. They have been reported for all the lower Colorado Yumans, those on the Gila, among Yumans and Shoshoneans of southern California and Baja California, and in diminished form among upland Yumans in western Arizona, and beyond among Chemehuevi and Southern Paiute. There are analogous song series or chants on eastward in the Southwest, but the Yuman type of cycle centers in the Colorado-Gila and adjacent regions.

36 Kroeber, *Handbook*, p. 749.
37 Spier, *Yuman Tribes*, p. 197.

The cycles are known to the natives by title or at least by a catchword that serves as title. Titles are duplicated in tribe after tribe, and it has been customary to assume that songs of identical title had common melody and content. Yet it is clear that there are differences. Not only are there fewer songs per cycle among outlying tribes, but, for example, where the Mohave cycles purport to relate the great myths, as a rule the Maricopa songs tell of individual dream experiences. The difference is not as great as this simple statement would suggest. Both Mohave and Maricopa relate dream experiences, for the Mohave narratives are presented as personal experiences of dreamers—the singers—who projected themselves back to the beginning of time where they were observers of the events they relate. Further, among both peoples the dream narrative is carried forward in a discontinuous series of songs, each describing a single incident, often by quite recondite allusion. It is highly probable that in both tribes the content of the individual songs has much the same myth reference and hence the seemingly disparate tribal repertoires may be quite similar.

The question has been asked in how far the several Yuman song cycles show specific resemblance—in melody, content, or title. It had been my intention to carry my Maricopa phonograph records[38] to each of the Yuman-speaking groups as a partial test. A beginning, but no more, was made with the Mohave.

The basis of reaction to the Maricopa records was quite different for the two informants. Welsh, who is slightly deaf and does not pretend to know Mohave songs well (though he knows the myths), was obviously trying to catch the words, not the melodies. On the other hand, Tcipokxumara was palpably responding to melody rather than words. Their attempts at identification with Mohave songs follow.

Maricopa	*Welsh's identification*	*Tcipokxumara's identification*
Mountain Killdeer (vitari'c)	Old House or Buzzard	elyca
Buzzard (ce)	Buzzard	ace', Buzzard (not Mohave)
Ilyica'c		elca' (not Mohave)

Tcipokxumara's response to Mountain Killdeer was hesitant, but to the two others immediate and certain. The remaining four Maricopa records played were

38 These cylinder records are very imperfect: while melody is fairly clear, the words are not. For identification of the songs see Spier, *Yuman Tribes*, p. 254 ff, with analysis of the music by George Herzog, pp. 271-279.

songs unknown to or not recognized by either informant. The older informant stated that the Mohave do not have the following Maricopa songs: Buzzard, Ilyicá'c, Morning Star (xomáce' kovátai'yà), Nighthawk (uru'), People (pipa'), Seal (tuxa'r^{A}, fasten), Wine (xatca'), and Mocking Bird (the last credited to Maricopa by Kroeber but denied by them). Welsh stated: "They sing Old House and Buzzard nearly alike." The implication was that "they" meant Mohave (I failed to make sure), but both Tcipokxumara and Kroeber's informants declare it is not a Mohave song. Welsh's Old House probably refers to the house of the dying god and hence may yet be identified among the Mohave song cycles relating to this myth incident. A significant feature of this brief test of identities is that songs of other tribes are familiar enough to the Mohave though they have not taken them for their own.[39]

All of this is unsatisfactory. But it is quite clear that cross-identifications cannot rely on song titles alone; content must be compared independently, and melodies may well have diffused apart from words.

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39 Such knowledge of foreign song cycles is, of course, not confined to the Mohave. Maricopa responses indicating knowledge of other Yuman cycle titles are given in Spier, *Yuman Tribes*, pp. 259-266, and Mohave knowledge in Kroeber, *Handbook*, pp. 786-787.

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